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ABSTRACT

This report examines the distribution of Canadian blacks in industries and occupations relative to all other employed Canadians. By establishing a control over labor market determinants in order to note the effects of non-labor market factors on this distribution, it is determined that the strongest non-labor market factors pull in the direction of disproportionate underrepresentation of blacks in high ranked industries and occupations and their disproportionate overrepresentation in low ranked industries and occupations. The authors also note that blacks outside the Atlantic provinces are, in general, proportionately better educated at all educational levels than most other employed Canadians. Tables and bibliography are included. (Author/WP)

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A PRELIMINARY REPORT ON THE SOCIO-ECONOMIC POSITION OF BLACKS IN THE CANADIAN REGIONAL SETTINGS AS REFLECTED IN THE 1971 CENSUS DATA

by

DAVID W. McKINNEY, JR.
DEPARTMENT OF SOCIOLOGY/ANTHROPOLOGY
UNIVERSITY OF GUELPH

LARRY CONNOR
WATERDOWN, ONTARIO

DAVID BLOOMFIELD
HAMILTON, ONTARIO

ELEANOR J. HULL
UNIVERSITY OF MANITOBA

ELIZABETH WOOD
UNIVERSITY OF GUELPH

GERALD HINBEST
UNIVERSITY OF GUELPH

YUK CHU LAU
UNIVERSITY OF GUELPH

PHILIP WEST
UNIVERSITY OF GUELPH

MATTHEW BUDDEN
UNIVERSITY OF GUELPH

PATRICE ATWELL
UNIVERSITY OF GUELPH

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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A PRELIMINARY REPORT ON THE SOCIO-ECONOMIC POSITION OF BLACKS IN THE CANADIAN REGIONAL SETTINGS AS REFLECTED IN THE 1971 CENSUS DATA[1]

ABSTRACT

A regional comparison is made of the industry/occupation distributions of 1971 census enumerated employed Canadian Blacks relative to that of all other employed Canadians. In controlling for the only inherent labour market determinants presumed to affect over time the distributions under study it has been possible to note the affects of non-labour market forces on the distributions, as of 1971. Under the conditions of control of the inherent labour market determinants, the strongest pull of the influential non-labour market forces on the enumerated employed Black distribution is in the direction of proportionate under representation in high ranked industries/occupations and over representation in the low ranked industries/occupations in Canada. The findings from a Statistics Canada special tabulation also indicate that enumerated employed Blacks outside of the Atlantic region are proportionately better educated at all education levels than all other employed Canadians with the exception of those employed Canadians at the nine through thirteen grade level in the Prairies and British Columbia.

This research report is being drawn from a much more extensive investigation which has as its principal aims the following:

1. What is the occupation/industry distribution of Canadian Blacks, relative to that of all other Canadians, at the national, regional, CMA, and provincial levels of aggregation? Or, where are Canadian Blacks in the occupations/industries matrix? Or, what is the economic deployment of Black labour in Canada?
2. What is the relative extent of upward job mobility between generations of Canadian Blacks, on the one hand, and between generations of a comparable sample of Croatian Canadians, on the other?

---

1. With any very large scale research achieved with relatively no funding, there is a long list of individuals to whom sincere debts of gratitude are owed. The research from which this report is drawn is no exception. Although it is not feasible to cite the entire list, mention must be made of Dr. L.R.V. Sealey, Mr. Benjamin Badjeck, and the University of Guelph Academic Computer Services—Mr. S.S. Swaminathan, Mr. J.E. Tofflemire, Dr. N.T. Ison; and Drs. B.L. Raktoe, G.T. Schwemer, J.J. Hubert of the University of Guelph's Department of Mathematics and Statistics. The assistance from the very long list notwithstanding the authors retain culpability for errors. A special debt of gratitude is owed Mrs. E.H. McKinney for the typing of this report.

3. Why have Canadian Blacks been more restricted in occupational attainment than other comparable ethnic groups?
4. What types of social policies are potentially effective in improving the socio-economic position of Canadian Blacks?

As subsidiary objectives this inquiry will:

a. Provide systematic data for a sector of Canadian society that has been noticeably neglected by scholars;[2]

and

b. Search for a new perspective on occupational ranking through its attempt to establish a distribution of "the best jobs", "the good jobs", "the fair jobs", and "the lousy jobs" comprising the Canadian labour market.[3]

STATEMENT OF THE PROBLEM

In the present preliminary report the focus of attention is directed to the socio-economic position of enumerated Canadian Blacks relative to that of all other Canadians, at the regional level of aggregation. The principal variables to be considered are: occupation, industry, income, education--as an index of occupational training, and age--as an index of occupational

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2. In this connection, it should be noted that there is a dearth of systematically collected information--past or current, on Canadian Blacks. Most regrettable is the fact that Canadian Blacks have not been included in even the most comprehensive reports on the socio-economic position of Canadian ethnic groups. Excluding population statistics, the census data collected on Blacks have been submerged in the "Other" category of Statistics Canada's special reports. There is a need for research on the economic well-being of ethnic groups in general, for it is clear that ethnicity is significantly correlated with degrees of poverty and wealth. There is a special need for research on Blacks because they have been neglected to date.

3. The descriptive phase of this larger investigation is scheduled for completion during the Fall of 1979.

experience. The question to be considered may be stated in one or more of the following forms: What is the occupation/industry distribution of enumerated Canadian Blacks relative to that of all other Canadians? Or, where are enumerated Canadian Blacks in the occupations/industries matrix? Or, what is the economic deployment of enumerated Black labour in Canada? In null form the hypothesis may be stated as follows: There will be no difference in the occupation/industry distribution between enumerated Canadian Blacks and all other Canadians.

The nucleus in the set of socio-economic variables in Canada--and North America generally, is the concept occupation. Occupation has been usefully defined as "...the kind of work performed irrespective of the kind of business in which it is carried on or the 'status' of the individual performing it" (36, p.7). As such, an occupation represents "...a set of tasks that require a body of skills, knowledge, experience or aptitudes" (51, p.7). The term "...industry is defined as a group of operating units e.g. companies or establishments, engaged in the same or a similar kind of economic activity, e.g. logging camps, coal mines, clothing factories, department stores, laundries" (51, p.7). Accordingly, occupation will be used to indicate and describe the number of engineers, electricians, managers, porters, etc.; whereas individuals employed in an industry will include some managers, but also clerks, labourers, perhaps some technicians, and certainly many others.

The means employed to identify and classify occupations is the Canadian Classification and Dictionary of Occupations (CCDO). "The CCDO provides a systematic classification structure to identify and categorize the entire range of occupational activity in the Canadian economy" (8-Vol. 1, p.xiii). In this classification system the elements involved in an occupational description are:

1. The activity set of tasks to be performed;
2. the occupational title for the set of tasks;
3. the numerical code number assigned to the occupational title;
4. the industry, designation(s);
5. the occupational characteristics ratings;
6. the lead statement;
7. the statement of duties; and
8. the alternate, related and other occupational titles (8-Vol. 1, p.xv).

As a basic principal for classifying occupations into groups the CCDO uses "kind of work performed." In addition, supplementary criteria are used to achieve successive subdivisions, or levels, appropriate to each major "kind of work." For each major "kind of work" and its respective subdivisions there is an identifying numerical code. The most detailed coding level uses seven digits. Within these seven digits are the following four levels of classification:

1. Major group - first two digits, signifying "kind of work". There are 22 major groups;
2. Minor group - first three digits, indicating the respective subdivisions for that "kind of work". Thus: clerical (paper-work handling as a major "kind of work") occupations are subdivided by the type of paper work; i.e., bookkeeping; office machine operators; material recording, scheduling and distributing; library, file and correspondance; reception, information, mail and message distribution. These subdivision types are common to all industries. Hence, it does not matter what products are referred to in the recording, bookkeeping, scheduling, etc. But: For the major group classified as processing occupations, the minor unit subdivision refer to what materials/ products are processed since the skills and experience vary for

processing wood, glass, metal, food, plastics, etc. In the minor group there are 81 titles;

3. Unit group - first four digits, the fourth digit signifying the subdivisions of the minor group. Four hundred and eighty six titles comprise the unit group;
4. The last three digits allow for particular job title classifications appropriate to each unit group. At this level there are 25,000 separate occupational titles.

This classification system has been designed to allow Canada Manpower to relate job applicants to job openings. When skilfully employed the CCDO classification system reduces the arbitrariness in categorizing and thus coding of job descriptions. (For a definition of each occupational category in the "Major group", see Appendix A, pages 100-103).

It is important to emphasize that in this report "Blacks" is being used to represent only those Blacks who were enumerated as either "Negro" or "West Indian" in the 1971 census. (The census identification and coding of Canadian Blacks with corresponding sample considerations is discussed in Appendix B, pages 104-107. Similarly, "All Other Canadians" will refer to those persons who were not enumerated as either "Negro" or "West Indian" in the 1971 Canadian Census. "Income" in this report denotes total salary, wages, tips, commissions, bonuses and piece-rate reimbursements--before deductions.

SAMPLES, DATA COLLECTING MEANS AND PROCESSING PROCEDURES

Sample Information

There are four samples involved in the more extensive investigation. A summary of information on each of the respective samples is given in Table 1. The preliminary findings of this report are based on samples identified below as numbers 1 and 2 in Table 1. A detailed breakdown of sample 1 is provided

in Table 1.1 and its corresponding regional breakdown is given in Table 1.2. Table 1.3 presents the sex and full-time employed proportions of sample 2. As will be noted in Table 1 samples 1 and 2 are from the same 1971 Census of Population and Housing Data base. The 1971 Census, Population, Ethnic Groups (Catalogue 92-723 Vol. 1--part: 3-Bulletin 1,2 - 3) is presumed to be from the

TABLE 1

SAMPLE INFORMATION

	GEOGRAPHICAL LOCALE	SOCIAL GROUP FROM WHICH SAMPLE UNITS ARE DRAWN	TYPE OF SAMPLE	SIZE OF SAMPLE
1.	Canada: Statistics Canada Custom Tabulation (SCCT)	Employed Canadians, 15-64 years: from the 1971 Census of population and housing data base	The entire population from the one in three stratified multistaged cluster census sample[4]	7,875,435
		Enumerated Black		27,750
		All other Canadian		7,847,685
2.	Canada: Statistics Canada's Public use sample tapes (PUST)	All Canadians from the 1971 Census of population and housing data base	1% sample drawn from the one in three stratified multistaged cluster census sample	78,067
3.	Montreal, Que.	Blacks	Availability sample	1,130
	(a) Sub-sample	English speaking		815
	(b) Sub-sample	French speaking		315
4.	Hamilton, Ont.	Croatians	Stratified multistaged cluster sample	133

same Population and Housing Data base. The latter lists 34,445 under the label "Negro" and an additional 28,025 as "West Indians"--making for an enumerated total of 66,470 Blacks in Canada as of 1971. There is sound reason for assuming that the 66,470 figure constitutes a considerable under-representation of Blacks in Canada as of 1971. As such, it is apparent that some sizable

4. It is the understanding of the authors of this report that the 1/3 sample is extended via an appropriate formula to the actual census of population and housing data base. In this connection, Statistics Canada has noted: "The size of the matrix involved in this tabulation as compared to the population

proportion of Canadian Blacks were not enumerated in the 1971 Census as Blacks.[5] The proportion of which the census enumerated Blacks represents of the total Canadian Black population is, of course, unknown. Our census data

TABLE 1.1

DATA SET NO.1: CANADA LEVEL OF AGGREGATION

GEOGRAPHICAL LOCALE	SOCIAL GROUP FROM WHICH SAMPLE UNITS WERE DRAWN	SAMPLE SUBSETS	SIZE OF SAMPLE	PERCENT OF RELEVANT SAMPLE TOTAL
Canada: Statistics Canada Custon Tabulation (SCCT)	The employed in Canada in 1970— 15-64 years of age: from the 1971 Census of Population and Housing Data Base	Combined Sexes	7,875,435	100
		Males	5,167,755	66
		Females	3,707,680	34
		Enumerated Blacks	27,650	100
		Males	14,565	53
		Females	13,185	48
		All Other Canadians	7,847,685	100
		Males	5,153,190	66
		Females	2,694,495	34

reveals that 71 percent of the enumerated employed Black males are immigrants—92 percent of whom immigrated to Canada between 1961-71.

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groups within it necessitate a warning on possible reliability problems in cells of the matrix. Cells with low counts (5,10) should not be taken as fully accurate. These counts are from a one in three sample and have been subjected to a random rounding technique so that 5 could be any number from 1 to 9 or 1 to 3 in the sample and 10 could be any number from 6 to 14 or 2 to 4 in the sample. No meaningful conclusions can be arrived at from such low counts." The tactic described in the preceding citation from Statistics Canada's "Estimate of Cost" form is designed to maintain confidentiality of respondents. In this report only marginal totals are involved.

5. See Appendix B, p. 104-107 for supporting evidence and detailed discussion of issues concerning census identification and coding of Canadian Blacks with corresponding sample considerations. In this connection, note in particular Tables 14 and 15 on pages 105 and 106 respectively.

TABLE 1.2

DATA SET NO. 1: REGIONAL LEVEL OF AGGREGATION

GEOGRAPHICAL LOCALE	SOCIAL GROUP FROM WHICH SAMPLE UNITS WERE DRAWN	REGIONAL SAMPLE SUBSETS	SIZE OF SAMPLE	PERCENT OF RELEVANT SAMPLE TOTAL
Canada: Statistics Canada Custom tabulation (SCCT)	The employed in Canada in 1970--15-64 years of age: from the 1971 Census of Population and Housing Data Base	Atlantic[6]	596,450	100
		Blacks	1,595	neg.
		Males	1,070	67
		Females	525	33
		OTHERS	596,855	100
		Males	409,105	69
		Females	185,750	31
		Quebec	1,952,890	100
		Blacks	4,640	neg.
		Males	3,330	72
		Females	1,310	28
		OTHERS	1,958,250	100
		Males	1,304,200	67
		Females	654,050	33
		Ontario	3,081,845	100
		Blacks	18,430	neg.
		Males	9,304	50
		Females	9,126	50
		OTHERS	3,063,415	99
		Males	1,971,155	64
		Females	1,092,260	36
		Prairie[7]	1,353,445	100
		Blacks	2,105	neg.
		Males	1,235	59
		Females	870	41
		OTHERS	1,351,340	100
		Males	885,375	66
		Females	465,965	34
		B.C.	823,855	100
		Blacks	950	neg.
		Males	635	67
		Females	315	33
		OTHERS	822,915	100
		Males	445,035	54
		Females	277,880	34

6. At the time this report was being prepared certain required data from P.E.I. and the N.W.T. and Y. were not available. As such, the Atlantic region in this report includes Newfoundland, Nova Scotia and New Brunswick. The number of 1971 census enumerated employed Blacks reported for P.E.I. was zero; thirty-five Blacks were reported for N.W.T. and Y.

7. The Prairie region includes Manitoba, Saskatchewan and Alberta.

TABLE 1.3

DATA SET NO. 2: CANADA LEVEL OF AGGREGATION

GEOGRAPHICAL LOCALE	SOCIAL GROUP FROM WHICH SAMPLE UNITS WERE DRAWN	SAMPLE SUBSETS	SIZE OF SAMPLE	PERCENT OF RELEVANT SAMPLE TOTAL
Canada: Statistics Canada's Public Use Sample Tapes (PUST)	All Canadians from the 1971 Census of Population and Housing Data Base --Long Form Census Questionnaire	Combined Sexes	214,019	100
		Male	107,169	.50
		Female	106,850	.50
		Employed: Full Time	78,067	100
		Male	53,399	.68
		Female	24,668	.32

DATA COLLECTING SCHEDULE

The census schedule used to elicit data represented in and by samples 1 and 2 in Table 1 is the long form--self-admininistered by one in every third Canadian household. The sections of the long form census schedule which is directly relevant to this preliminary report pertain to questions eliciting answers concerning "ethnicity" (presumably items 15, 11, 14, and possibly 17);[8] occupation (items 31-39); income (item 40); education (items 20, 23, and 24); and age (item 6).

Apart from the issues posed by the census schedule having to do with the coding of Blacks, the schedule's principle weakness, as judged from the standpoint of the objectives of this inquiry, lies with the failure to establish linkage among each of the labour-force variables. The present investigation

8. The relevance in this research report of the category "ethnicity" lies in the manner by which Statistics Canada identifies and hence codes Canadian Blacks. For a detailed consideration of these and corresponding sample issues see Appendix B, pp. 104-107.

required the assumption that the reported occupation generated: (a) the reported weeks worked during 1970; (b) the reported hours usually worked per week; and (c) the reported income from wages and salaries. Such an assumption is not supported by the actual structure of the census questionnaire. This lack of confidence in assuming linkage between occupation, income, weeks worked in 1970, and usual hours per week constitutes the Achilles' heel of this report. In recognition of these difficulties the findings of this report will rest on the following assumptions:

1. That most persons will have remained in the same job with the same employer;
2. Of those persons who have changed employers most will have the same job (i.e., the job for which they have experience);
3. Of those who have changed jobs most will have a similar job which will be coded in the same major occupation group--as such, the relevance of experience obtaining;
4. Of those who have changed major occupation group most will have a different job with a similar level of employment income;
5. Finally, it may be assumed that deviations of all of the above suppositions will tend to be balanced out across occupational categories.

To the extent that the preceding assumptions obtain the occupational assessment indices employed in this inquiry will not be excessively distorted.

PROCESSING PROCEDURES

It is accepted that the average annual income generated by an occupation reflects in some significant measure the amount of training the occupation requires and the experience of the workers in the respective occupations. In addition, it is expected that occupational distributions will reflect

differences in training--as indexed by education, and experience--as indexed by age. Also, it is readily apparent that the income generated in a given occupation, by workers with comparable experience, will vary by industry. As such, unless there is some factor(s) impeding access to and mobility in the labour market, one may predict:

1. That labour force samples (including "ethnic", "racial", or other social groups) having comparable training and experience will display comparable occupation and industry distributions (Fig. 1, p.12);
2. Correspondingly, social groups ("racial","ethnic", or otherwise) with better training and/or with a larger proportion of prime age working members[9] will be "over" represented in the better paid occupations and/or industries; and "under" represented in the poorer paid occupations and/or industries, as represented in Fig. 3;
3. Conversely, social groups ("racial", "ethnic", or otherwise) with less training and/or with a significantly smaller proportion of prime working age members will be "under" represented in the better paid occupations and/or industries; and "over" represented in the poorer paid occupations and/or industries, as depicted in Fig. 2.

The foregoing reasoning, with accompanying predictions, requires data processing tactics which: (a) establishes, as a point of reference, equality in size, training and experience between any two sub-sample distributions of employed enumerated Canadian Blacks and all other employed Canadians; and (b) simultaneously, allows for the measure of any inequality between the occupation and/or industry distributions of the two study sub-samples. As

9. The prime working age range is used to signify those ages which are considered to be neither too young nor too old for initial employment in practically any job. It is assumed that the prime working age range is from 24-44.

FIG. 1 - EQUAL OCCUPATION AND/OR INDUSTRY DISTRIBUTIONS

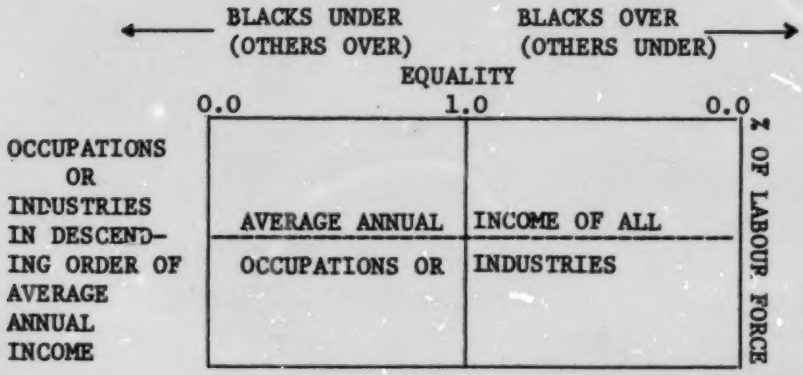


FIG. 2 - UNEQUAL OCCUPATION AND/OR INDUSTRY DISTRIBUTION REFLECTING LESS TRAINING AND/OR SMALLER PROPORTION OF PRIME WORKING AGE MEMBERS

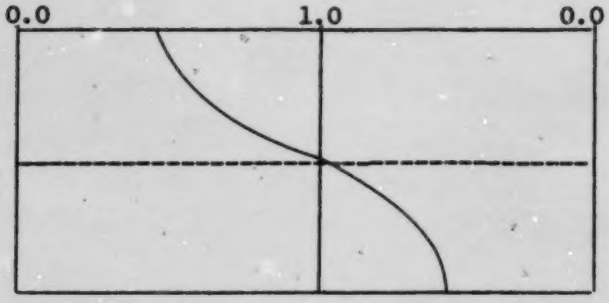
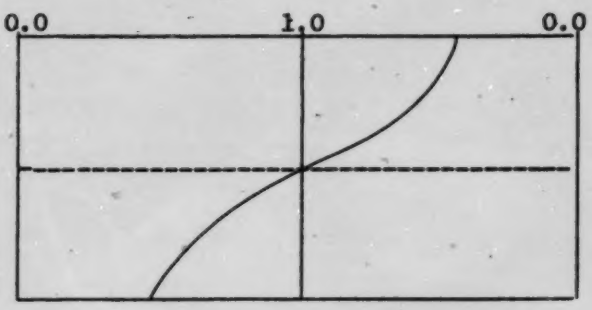


FIG. 3 - UNEQUAL OCCUPATION AND/OR INDUSTRY DISTRIBUTION REFLECTING BETTER TRAINING AND/OR LARGER PROPORTION OF PRIME AGE MEMBERS



a function of establishing equality in size, training and experience of the two sub-sample distributions, the expected equivalence in their respective occupation and/or industry frequencies become points of reference for measuring deviation--and hence, inequality between the occupation and/or industry distributions of the two study sub-samples. Accordingly, observing the respective occupation and/or industry frequencies registered for the enumerated black sample, deviations from the numerically proportionate expected frequencies for Canadian Blacks (27,750) relative to all other Canadians (7,847,685)--with comparable training and experience, may then be noted as "under" or "over" representation in the respective occupation and/or industry: "under" if the Black sample's occupation and/or industry frequency is proportionately less than the corresponding expected frequency; and "over" if the Black sample's occupation and/or industry frequency is proportionately more than the corresponding expected frequency.

Equality in training and experience may be achieved by comparing the same educational grade level and/or age range for any two given sub-sample distributions. A ratio is applicable as a means of equating the gross inequality in the N-sizes of the two distributions. In the research being reported here the ratio chosen to achieve the expected frequency proportionality also serves to register and display occupation and/or industry frequency deviations from the corresponding proportionate expected frequencies for enumerated Blacks. The ratio in question is the odds ratio (11, 19, 20, 39).[10] This ratio fulfills the required index function reasonably well.

10. Fleiss, Joseph L.; Statistical Methods for Rates and Proportions. (Toronto: John Wiley and Sons, 1973), pp. 43-66.

Following Fleiss' presentation of the odds ratio, applied to a fourfold table such as:

	ENUMERATED BLACKS	ALL OTHERS
In occupation X	a	b
Not in occupation X	c	d

The odds ratio is defined as:

$$\phi = \frac{ad}{cb} = \frac{\frac{a}{c}}{\frac{b}{d}}$$

Proportionately, if we have equality of representation in an industry or occupation then $\phi = 1$. Where Blacks are under-represented in occupation X the odds ratio will have values that range from:

$$0.0 < \phi < 1.0$$

and clearly $1-\phi$ measures the extent of the under-representation (viz. inequality). Where Blacks are over-represented the values will range from:

$$1.0 < \phi < \infty$$

Since the range of values for <u>over</u> and <u>under</u> representation are unequal and thus unsuitable for direct comparison, all values of ϕ greater than one have been transformed to the inverse of the odds ratio; that is:

$$\frac{1}{\phi} = \frac{cb}{ad} = \frac{\frac{b}{d}}{\frac{a}{c}}$$

(Notice that for this latter case $0.0 < \frac{1}{\phi} < 1.0$). As such, the under representation of "<u>others</u>" is effectively displayed as over-representation of Blacks.[11] Therefore $1 - \frac{1}{\phi}$ measures the extent of the over representation (i.e., inequality of representation of Blacks).

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11. Blacks under/others over signifies proportionately fewer Blacks; whereas Blacks over/others under signifies proportionately fewer all other Canadians—but used to represent over representation of Blacks.

The standard error of the odds ratio is used to assess the precision of the estimated odds ratio. Chi square is employed as a test of the null hypothesis which is: the odds ratio in the population is equal to 1, with significance level set at 0.01. Given the preceding conditions for decision, the following three major classifications emerge from the data of this investigation:

1. Insufficient data

   a. Zero Blacks are reported. As such, the odds ratio is undefined. These results are denoted by a (Δ);

   b. Reported industry and/or occupation frequencies for Blacks varied from 1-19. In this connection Statistics Canada notes that "cells with low counts (5, 10) .... are subjected to a random rounding technique so that 5 could be any number from 1-9 or 1-3 in the sample, and 10 could be any number from 6-14 or 2-4 in the sample." These results are signified by an (*).

2. Acceptance of the null hypothesis

   The reported industry and/or occupation frequencies for Blacks are proportionately not significantly different at P = 0.01. Accordingly, the odds ratio is similar to 1 -- namely, equality between the two study samples. The symbol used for these results is (0);

3. Rejection of the null hypothesis

   The Black industry and/or occupational frequencies are proportionately significant at P = 0.01. These results may be "under" or "over" representations. Thus:

   a. Where the odds ratio is <u>less</u> than 1 the Black sample's industry and/or occupation frequencies are proportionately less than the

corresponding expected frequencies. These results are symbolized in the tables and corresponding bar-graphs at the end of the text by the (-) sign ;

b. Where the odds ratio is greater than 1 the industry and/or occupation frequencies for Blacks are proportionately more than the corresponding expected frequencies. These results are identified in the tables and corresponding bar-graphs at the end of the text by the (+) sign.

ORGANIZATION OF THE FINDINGS INCLUDED IN THIS REPORT

This report includes a core of sixty tables and graphs. It is therefore useful to provide the reader with the plan of organization of these results. The odds ratio indices, depicting the industry or occupation distributions to be reported according to the classifications outlined above, will be presented in a series of ordered tables with corresponding bar-graphs. In this regard, a series comprising two tables and two equivalent bar-graphs will be presented for each of the four levels of education and three age-ranges. Accordingly, each series of four tabular/graphic presentations will be presented to depict the industry distribution at the four grade levels and three age-ranges; then, a parallel series of four tabular/graphic presentations will follow to depict the occupations at the four levels of education and three age-ranges. Each such series of four tabular/graphic portrayals will provide in the following order:

1. A tabular portrayal for each industry (or occupation) by region of the distribution of the classified decisions (see page 15) according to levels of education (or age-range);
2. A graphic display, analogous to the first table in a series, which depicts the classified decisions (see page 15) for each industry

(or occupation) by levels of education (or age-ranges) for the five Canadian regions;

3. A table of rank locations by regions for each industry (or occupation) according to average annual wage and salary income of all full-time employees in the respective industries (or occupations) per region in 1970. The percentage of the labour force in each region represented by the respective industries (or occupations) for the stated labour force population is also provided; and
4. A summary portrayal, corresponding to the second table in a series, which depicts graphically the classified decisions (see page 15) for the rank locations of industries (or occupations) by region, according to levels of education (or age-ranges). It is this last graph in each series that permits a regional comparison in terms of the predictions set forth on page 12.

The order of these tabular/graphic presentations will be as follows: industries followed by occupations for each of the educational grade levels; then, industries followed by occupations for each of the age-ranges. Within the same series the numerical identification for the tables is the same as for the graphs. Bearing in mind the sequence outlined above for the two tables and two graphs comprising a series, the numbering occurs as follows:

A. SERIES I

Industries by regions for each level of education	1) TABLES 6.1 - 6.4 2) FIG. 6.1 - 6.4 3) TABLES 6.1.1 - 6.4.1 4) FIG. 6.1.1 - 6.4.1

B. SERIES II

Occupations by regions for each level of education	1) TABLES 7.1 - 7.4 2) FIG. 7.1 - 7.4 3) TABLES 7.1.1 - 7.4.1 4) FIG. 7.1.1 - 7.4.1

C. SERIES III

Industries by regions for each age-range	1) TABLES 8.1 - 8.3 2) FIG. 8.1 - 8.3 3) TABLES 8.1.1 - 8.3.1 4) FIG. 8.1.1 - 8.3.1

D. SERIES IV

Occupations by regions for each age-range	1) TABLES 9.1 - 9.3 2) FIG. 9.1 - 9.3 3) TABLES 9.1.1 - 9.3.1 4) FIG. 9.1.1 - 9.3.1

These series of tables with equivalent bar-graphs have been placed at the end of the text--preceded only by the level of education and age-range tables with analogous graphs. With the help of the legend the tables will be self-explanatory. What follows will be a brief explanation of the bar-graph formats.

The under and over representation scale on the graphs, depicting the industry/occupation distributions, will appear as follows:

← BLACKS UNDER (OTHERS OVER) — EQUALITY — BLACKS OVER (OTHERS UNDER) →

.1 .2 .3 .4 .5 .6 .7 .8 .9 1.0 .9 .8 .7 .6 .5 .4 .3 .2 .1

This scale will be represented on the horizontal axis at the top of the graphs in question. The left-vertical axis of these graphs will depict the industries or occupations. In the summary graphs of each series the industries or occupations will be listed in descending order of average annual income by regions. On the right-vertical axis of these graphs the reader is to imagine the percentages of the labour force represented in each region by the respective industries or occupations, for the stated labour force population under consideration. The relevant percentages are provided in the corresponding table identified with the same three digits. Applying the preceding graphing format to the summary graphs the predictions given on page 11 are expected to graphically conform to Figs. 1, 2 or 3 on page 12. Given our assumptions, failure to conform to one of the three predictions as stated on page 11

signifies that some factor(s) is(are) impeding access to and mobility in the Canadian labour market.

PRELIMINARY CONCLUSIONS

A regional comparison is made of the industry/occupation distributions of 1971 census enumerated employed Canadian Blacks relative to that of all other employed Canadians. As a function of establishing equality in size, training--as indexed by education, and experience--as indexed by age, of the two sub-sample distributions, the expected equivalence in the respective industry or occupation frequencies become points of reference for measuring "under" and "over" representations.

With respect to training--as indexed by education, the findings of this investigation from a Statistics Canada special tabulation reveal that proportionately, in all regions, with the exception of the Atlantic, there are fewer enumerated employed Blacks with less than grade nine schooling than all other employed Canadians. (See Table 4 and equivalent Fig. 4.1 on pages 41 and 43 respectively). Also, proportionately--in all regions with the exception of the Atlantic, there are more enumerated Blacks with five-plus years of university than all other employed Canadians. Proportionately, in the Atlantic there is no significant difference between the number of enumerated employed Blacks and all other employed Canadians with five-plus years of university. Further examination of Table 4 and Fig. 4.1 discloses that in all regions--with the exception of the Atlantic, there are proportionately more enumerated employed Blacks than all other employed Canadians with one to four years of university. In Quebec and Ontario regions there are proportionately more enumerated employed Blacks with nine to thirteen years of schooling than all other employed Canadians in the two regions specified. In the Atlantic, Prairies and British Columbia regions, enumerated employed Blacks are

proportionately under represented in the 9-13 years of schooling category.

Regarding experience--as indexed by age-ranges, the data reproduced in Table 5 and Fig. 5.1, on pages 42 and 43 respectively, reveals that enumerated employed Blacks proportionately out-number all other employed Canadians in the prime age-range of 25-44 in all Canadian regions. At the fifteen through twenty-four and forty-five through sixty-four age ranges it may be observed that proportionately enumerated employed Blacks are under represented in each of the Canadian regions. This age-range pattern depicted in Fig. 5.1 reflects the immigrant character of the 1971 census enumerated Black Canadian population --noted elsewhere in this report (see Tables 14 and 15 on pages 105 and 106 respectively).

Status of the Predictions

In the investigation from which the present preliminary report stems it is reasoned that, if there are no non-market factors impeding access to and mobility in the labour market, a racial and/or ethnic groups' industry and/or occupational distributions will over time significantly reflect differences in training and experience. As such, if the industry and/or occupation distributions of study samples are equivalent in size, training and experience then it follows that their industry and/or occupation distribution frequencies will be equivalent. Correspondingly, given equivalence in size of samples A and B, but working members of sample B are better trained and/or has a larger proportion of prime age working members than sample A, then sample B's distribution is expected to be over represented in the higher paid occupations and/or industries and under represented in the lower paid occupations and/or industries. Conversely, given equivalence in size of samples A and B, but working members of sample B are less well trained and/or has a smaller proportion of prime age working members than sample A, then sample B's

distribution is expected to be under represented in the higher paid occupations and/or industries and over represented in the lower paid occupations and/or industries.

Since in this preliminary communication it is not possible to report on the affects of education and/or experience, the tactic pursued in this report has been to control for education, age, and sample size; moreover, the regional comparison in this report constitutes a control of regional disparities. Thus, any inequality between the Black sample and the all other employed Canadian sample cannot be due to sample size, education as an index of training, age-range as an index of experience or regional area. Accordingly, in assessing the findings in this report it is crucial to bear in mind that any inequalities (i.e., any over or under representations of Blacks) between the enumerated employed Blacks and all other employed Canadians as of 1971 has to be accounted for in terms of factors not dealt with in this present report.[12] Thus, in this report, only proposition number one is being subjected to testing.

In this connection, two additional important considerations require noting. First, only marginal totals are involved in this report. As such, it has not been possible in this communication to report results obtainable under conditions of simultaneous control of education and age. Applying such a required condition would alter somewhat the industry and/or occupation representation pattern for enumerated employed Blacks. However, it is presumed that the variance due to the absence of simultaneous control of education and

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12. In this regard, it may be useful to mention that in subsequent reports results of this inquiry established under conditions of additional appropriate controls (i.e., native/immigrant, French/English, minority, race and some class stratification dimensions) will be made available.

age is not sufficient to justify withholding this preliminary report from public circulation. The second important consideration to be noted is that the occupation frequencies for the two relevant samples involved in this inquiry (i.e., samples one and two in Table 1, page 6) are aggregated at the "major group" level of classification (see pages 4-5). As such, it is significant to bear in mind that each "major group" comprises a wide range of "minor group" occupations; also, each "minor group" includes a broad range of "unit group" occupations; and the latter in turn encompasses an extended range of particular job classifications. Within each of the four occupational levels noted there are extensive mean-income ranges and disparities.[13]

Assessment of Proposition No. 1

In setting the stage for a test of proposition number one it may be useful to comment briefly on the idea and use of the null hypothesis for the benefit of those readers lacking familiarity with this type of reasoning. The idea of the null hypothesis is to assume that no difference exists between something which may be called (X) and something which may be called (Y). In the research being reported on, let (X) stand for the enumerated employed Blacks; and let (Y) stand for all other employed Canadians. In assuming such a null hypothesis one then proceeds to disprove the hypothesis, if possible. If an effective test, established to disprove the hypothesis, fails, then the null hypothesis is sustained and one would conclude in this investigation that no difference exists in the industry and/or occupation frequency distributions of enumerated employed Blacks and all other employed Canadians. Accordingly, since the only inherent market factors that are

13. In a subsequent report detailed consideration will be devoted to the frequency distributions observed within the successive levels of selected occupational "major groups".

presumed to significantly affect over time the industry/occupation frequency distributions of racial/ethnic groups are training and/or experience (both of which are controlled in the present research), it could be concluded that no non-labour market factors are significantly affecting the respective distributions of enumerated employed Blacks and all other employed Canadians. The foregoing reasoning and corresponding conclusions--stated and unstated, would follow from proposition number one being sustained.

On the other hand, if the testing designed to disprove the null hypothesis succeeds then the null hypothesis is rejected and discarded. Given: (a) the assumption that training and experience are the only inherent labour market factors (i.e., independent variables) significantly affecting over time the industry/occupation frequency distributions of racial/ethnic groups; and (b) these two factors in question are effectively controlled for this particular research report; it could then be concluded that non-labour market factors are significantly affecting the respective distributions of enumerated employed Blacks and all other employed Canadians. As such, it could be further legitimately concluded that the greater the difference between (X) and (Y), the more important (i.e., the greater the extent, or the more pervasive, etc.) these "unknown" non-market forces are in determining the frequency distributions of enumerated employed Blacks vis-a-vis all other Canadians. In which case this investigation must proceed to the next stage in the attack--ultimately, addressing itself, as a matter of refinement, to the task of assessing the affects of the isolated determinants of the shape of the industry/occupation frequency distributions of enumerated employed Blacks vis-a-vis all other Canadians. The latter reasoning and corresponding conclusions--stated and unstated, would follow from proposition number one being rejected.

It is of course apparent from the foregoing considerations that the outcome in testing the null hypothesis is either its acceptance or its rejection. What may not be as apparent is that the reasoning from which the three propositions in this report stem (see page 11) is the counterpart to the reasoning involving the use of the null hypothesis. This complement derives from the fact that the expected equivalence in industry or occupation frequencies of Blacks and all other Canadians is equal to the null hypothesis being sustained. Correspondingly, the rejection of the null hypothesis is an acknowledgement of significant deviation from the numerically proportionate expected frequencies for Blacks relative to all other Canadians--with comparable training and experience. As such, the negative deviations are noted as "under" representations and the positive deviations are labeled "over" representations. Hence, it follows that an assessment of proposition number one entails an appraisal in terms of: (a) acceptance; (b) rejection; (b_1) "over" representation; (b_2) "under" representation; and (c) insufficient data. Moreover, each of the preceding possibilities may be noted for the high, and for the low, ranked industries or occupations. In fact, with the exception of "insufficient data", the text will consist of assessments made in terms of the foregoing categories--although not in the order mentioned above.

Bearing in mind the preceding considerations the reader is invited to study the summary Tables numbered 10, 11, 12 and 13, to follow. These tables respectively provide the frequency distribution of decisions which resulted in the null hypothesis being sustained, rejected--including negative (i.e., under representations) and positive (i.e., over representations) deviations, and not tested due to insufficient data; the decisions in question are reported for high and low ranked industries, or occupations in the respective Canadian regions by levels of education, and then age ranges. Thus: (a) Table 10,

which summarizes Figs. 6.1.1 - 6.4.1 on pages 47, 51, 55, and 59 sets forth the decisions in question for high and low ranked industries in the respective regions by levels of education; (b) Table 11, which constitutes the frequency counts contained in Figs. 7.1.1 - 7.4.1 on pages 63, 67, 71, and 75 gives the decisions in question for the high and low ranked occupations in the respective regions by levels of education; (c) Table 12, which depicts the frequency distributions contained in Figs. 8.1.1 - 8.3.1 on pages 79, 83, and 87 provide the decisions in question for the high and low ranked industries in the respective regions by age ranges; and (d) Table 13, which summarizes Figs. 9.1.1 - 9.3.1 on pages 91, 95 and 99 displays the decisions in question for the high and low ranked occupations in the respective regions by age ranges.

If the non-research oriented reader is to understand through his <u>own</u> examination of Tables 10 -13 to follow it is necessary to have the succeeding background information. Each of the following tables numbered 10 - 13 comprises for each region, at the respective education level (or age range), a total of eight cells--four rows (identified as "R-", "S", "R+" and "I") and two columns (identified as "H" and "L"). The decisions, resulting in the null hypothesis being sustained, rejected, and not tested, are made on each of a total of twelve industries and fifteen occupations respectively. As such, when comparing the respective Canadian regions (either in terms of industries or occupations) at a given education level (or age range) attention is directed to the pattern in which the twelve (or fifteen) decisions are distributed within each region's eight cells. The meaning and significance of a frequency decision-pattern observed in any given eight cells is signified by the appraisal category (given on page 24) assigned to and hence represented by a particular cell and/or cell combination for the purpose of assessing proposition one. Correspondingly, an understanding of what the appraisal

category means is derived from the reasoning stated in the preceding section of this report entitled "Status of the Predictions" on pages 20-22, and "Assessment of Proposition No. 1" on pages 22-23. Accordingly, the S-row cells represent the decision counts that sustains proposition one; the H-column provides the proportion of S-row decisions occurring among the high ranked industries (or occupations), and the L-column gives the proportion of S-row decisions registered for the low ranked industries/occupations.[14] The latter considerations regarding "H" and "L" columns also apply to the "R-" (under representation) row, the "R+" (over representation) row, and the "I" (insufficient date) row. Concurrently:

a) The larger the proportion of the twelve industry (of fifteen occupation) decisions occurring in the S-row cells the less the influence of non -labour market factors on the distributions of employed Blacks and/or all other employed Canadians;

b) The larger the proportion of the twelve industry (or fifteen occupation) decisions registered in the "R" minus and/or "R" plus rows the greater the influence of the non-labour market factors on the distributions of the employed Blacks and/or all other employed Canadians;

c) The larger the proportion of the twelve (or fifteen) decisions occurring in the "R" minus-row/"H"-column cell, on the one hand, and "R" plus-row/"L"-column cell, on the other, the more pronounced is the under representation, among the high ranked industries/occupations,

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14. Identification of the industries (or occupations) depicted in the cell frequencies of any given eight cells-including their respective ranks, may be achieved by referring to the appropriate bar graphs identified by three digits; then referring its numerical rank identification in the bar graph to the correspondingly numbered rank in the three digit Table. For example in Table 10 on page 28, at the less than nine

and over representation, among the low ranked industries/occupations (cf. Fig. 2 on page 12). An example of the frequency decision-pattern in question may be observed in the Ontario region's eight cells depicting industries at the less than grade nine education level in Table 10 below; or in the Ontario region's eight cells depicting occupations at the fifteen through twenty-four age-range in Table 13 below;

d) The larger the proportion of the twelve industry (or fifteen occupation) decisions registered in the "R" minus-row/"L"-column cell, on the one hand, and the "R" plus-row/"H"-column cell, on the other, the more pronounced is the under representation, among the low ranked industries/occupations, and over representation, among the high ranked industries/occupations (cf. Fig. 3 on page 12); and

e) Etc. etc., ad infinitum.

To facilitate the testing of proposition one it will be assumed that sufficient data exists for the test when the insufficient data cases constitute no more than one third of the total number of industries (i.e., 4 of 12 industries--or 20 of a combined total of 60 for all regions), or occupations (i.e., 5 of 15 occupations--or 25 of a combined total of 75 for all regions). The level of education cases will be considered first, followed by the age range cases. The reader is now invited to study Tables 10-13 which will follow immediately.

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education level, the R plus-row/L-column cell frequency of (1) is identifiable in Fig. 6.1.1 on page 47 as rank 10. In Table 6.1.1, on page 46, the tenth rank is identifiable as service.

TABLE 10

TEST OF PROPOSITION NO. 1: FREQUENCY DISTRIBUTION OF DECISIONS IN WHICH THE NULL HYPOTHESIS IS SUSTAINED, REJECTED, AND NOT TESTED DUE TO INSUFFICIENT DATA--- REPORTED FOR HIGH AND LOW RANKED INDUSTRIES IN THE RESPECTIVE REGIONS BY LEVELS OF EDUCATION, 1971.

EDUCATIONAL LEVELS		CANADIAN REGIONS											
		ATLANTIC		QUEBEC		ONTARIO		PRAIRIES		B.C.		TOTAL	
		H	L	H	L	H	L	H	L	H	L	H	L
< 9	R-	2	1	1	1	4						7	2
	S	1	1	1			1	1				3	2
	R+	1	2		2		3	2	2		1	3	10
	I	2	2	4	3	2	2	3	4	6	5	17	16
9-13	R-	1	1	3	1	3	2	2	3		1	9	8
	S	3		2		1		2		3	2	11	2
	R+	1	2		2	1	3	1	2	1	1	4	10
	I	1	3	1	3	1	1	1	1	2	2	6	10
1-4	R-			1		2	1					3	1
	S			4	1	2		4	2	2		12	3
	R+	1			1	1	2				1	2	4
	I	5	6	1	4	1	3	2	4	4	5	13	22
5+	R-			1		1						2	
	S		1	1		3	1	2			1	6	3
	R+				1		1			1		1	2
	I	6	5	4	5	2	4	4	6	5	5	21	25

Education Legend

< 9 = Employed with less than grade 9.
9-13 = Employed 9-13 yrs. of schooling.
1-4 = Employed with 1-4 yrs. of university.
5+ = Employed with 5+ yrs. of university.

Decision and Rank Legend

R- = Rejection of the null hypothesis: under representation.
S = Acceptance of the null hypothesis.
R+ = Rejection of the null hypothesis: over representation.
I = Insufficient data.
H = High income rank
L = Low income rank

TABLE 11

TEST OF PROPOSITION NO. 1: FREQUENCY DISTRIBUTION OF DECISIONS IN WHICH THE NULL HYPOTHESIS IS SUSTAINED, REJECTED, AND NOT TESTED DUE TO INSUFFICIENT DATA—— REPORTED FOR HIGH AND LOW RANKED OCCUPATIONS IN THE RESPECTIVE REGIONS BY LEVELS OF EDUCATION, 1971.

EDUCATIONAL LEVELS		CANADIAN REGIONS											
		ATLANTIC		QUEBEC		ONTARIO		PRAIRIES		B.C.		TOTAL	
		H	L	H	L	H	L	H	L	H	L	H	L
< 9	R-	1	1	1	1	2	2					4	4
	S	3	1		1	3	1		1			6	4
	R+	1	2		3		3	1	2		1	2	11
	I	2	4	6	3	2	2	6	5	7	7	23	21
9-13	R-		2	5	2	6	3	1	3		1	12	11
	S	5	2	1	1		2	3	1	3	2	12	8
	R+	1	2	1	3	1	3	1	3	1	1	5	12
	I	1	2		2			2	1	3	4	6	9
1-4	R-			2		3	3					5	3
	S		1	2	2	2	3	3	2		1	7	9
	R+	1		1	2	2	1	1	1		2	5	6
	I	6	7	2	4		1	3	5	7	5	18	22
5+	R-			2		2		1				5	
	S	1			1	1	2		1	4		6	4
	R+	1		2	1	1	2	2				6	3
	I	5	8	3	6	3	4	4	7	3	8	18	33

Education Legend

< 9 = Employed with less than grade 9.
9-13 = Employed 9-13 yrs. of schooling.
1-4 = Employed with 1-4 yrs. of university.
5+ = Employed with 5+ yrs. of university.

Decision and Rank Legend

R- = Rejection of the null hypothesis: under representation.
S = Acceptance of the null hypothesis.
R+ = Rejection of the null hypothesis: over representation.
I = Insufficient data.
H = High income rank
L = Low income rank

TABLE 12

TEST OF PROPOSITION NO. 1: FREQUENCY DISTRIBUTION OF DECISIONS IN WHICH THE NULL HYPOTHESIS IS SUSTAINED, REJECTED, AND NOT TESTED DUE TO INSUFFICIENT DATA—— REPORTED FOR HIGH AND LOW RANKED INDUSTRIES IN THE RESPECTIVE REGIONS BY AGE RANGES, 1971.

AGE LEVELS		CANADIAN REGIONS											
		ATLANTIC		QUEBEC		ONTARIO		PRAIRIES		B.C.		TOTAL	
		H	L	H	L	H	L	H	L	H	L	H	L
15-24	R-					2	2					2	2
	S	3	2	3	1	3		1	2			10	5
	R+		1		2	1	2		2		1	1	8
	I	3	3	3	3		2	5	2	6	5	17	15
25-44	R-	2	1	4	1	3	1	2	1		1	11	5
	S	3	1	1	1	1		3		4	2	12	4
	R+		2		1	2	2	1	2		1	3	8
	I	1	2	1	3		3		3	2	2	4	13
45-64	R-		1	2	1	3	2		1			5	5
	S	3				1			2			4	2
	R+	1	2	1	2		2	1	1	1	1	4	8
	I	2	3	3	3	2	2	5	2	5	5	17	15

Decision Legend

R- = Rejection of the null hypothesis: under representation.
S = Acceptance of the null hypothesis.
R+ = Rejection of the null hypothesis: over representation.
I = Insufficient data.

Rank Legend

H = High income rank
L = Low income rank

TABLE 13

TEST OF PROPOSITION NO. 1: FREQUENCY DISTRIBUTION OF DECISIONS IN WHICH THE NULL HYPOTHESIS IS SUSTAINED, REJECTED, AND NOT TESTED DUE TO INSUFFICIENT DATA--- REPORTED FOR HIGH AND LOW RANKED OCCUPATIONS IN THE RESPECTIVE REGIONS BY AGE RANGES, 1971.

AGE LEVELS		CANADIAN REGIONS											
		ATLANTIC		QUEBEC		ONTARIO		PRAIRIES		B.C.		TOTAL	
		H	L	H	L	H	L	H	L	H	L	H	L
15-24	R-				1	5	3					5	4
	S	2	2	2	2	2		1	4		2	7	10
	R+	1	2	1	2		4		2	1		3	10
	I	4	4	4	3		1	6	2	6	6	20	16
25-44	R-	1	2	4	3	7	3	2	1	1	2	15	11
	S	1	3		1		2	3	4	6	3	10	13
	R+	3	1	3	2		3	1	2		1	7	9
	I	2	2		2			1	1		2	3	7
45-64	R-			1	3	4	1		1			5	5
	S	3	1	2	1	1	3		1		1	6	7
	R+	1	4	2	2	1	3	2	2		1	6	12
	I	3	3	2	2	1	1	5	4	7	6	18	16

Decision Legend

R- = Rejection of the null hypothesis: under representation.
S = Acceptance of the null hypothesis.
R+ = Rejection of the null hypothesis: over representation.
I = Insufficient data.

Rank Legend

H = High income rank
L = Low income rank

EDUCATION LEVELS

(Industries)

The industry cases for which sufficient data were reported to allow for the testing of proposition one occurred at the respective education levels within the corresponding regions identified below:

Education Levels	Regions
< 9	Atlantic and Ontario
9-13	All regions
1-4	Ontario
5+	None

Viewed in terms of eight-cell sets there are eight such industry/education cell-sets out of a total of twenty sets that meet the sufficient data criterion. Of the eight testable industry/education cell-sets proposition one is sustained in as much as one-third of the industry cases in British Columbia and the Atlantic. The eight-cell sets in the Atlantic and B.C. are at the nine-thirteen education level; the exact number of cases in which proposition one was supported was five of eight testable cases in B.C., and three of eight testable cases in the Atlantic. The conclusion derivable from the picture portrayed in Table 10, in which proposition one is rejected in over two thirds of the valid cases in six of the eight testable eight-cell sets, is that non-labour market factors are significantly affecting the respective distributions of enumerated employed Blacks and/or all other employed Canadians.

Moreover, the strongest pull of the influential non-labour market factors is in the direction of under representation in the high ranked industries and over representation in the low ranked industries. The under/over representation pattern in question becomes most apparent through an examination of the "TOTAL"

column in Table 10. From the "TOTAL" column view of the table it is observable at each education level that the cross-product of the R minus-row/H-column cell TIMES R plus-row/L-column cell exceeds the cross- product of the R minus-row/L-column cell TIMES R plus-row/H-column cell. This same observation obtains in Table 10 for each of the testable eight cell-sets.

Although it is unrealistic to assume that the industry/occupation distribution patterns under consideration have significantly changed during the intervening period between 1971 and 1979; in the absence of this evidence one can not effectively refute contrary assertions that significant changes in the patterns have occurred. As such, it may appear to some to be a futile exercise in devoting attention to the question of what practical implications derive from such findings from the viewpoint of Canadian Blacks seeking employment. Be that as it may, such considerations will be addressed in this report with hopefully the understanding of the reader that such considerations may in fact be no more than an exercise.

In considering the practical implications of the findings in the industry/education matrix identified as Table 10, suppose the following is assumed. A poor job opportunity region for Canadian Blacks is one in which there is a proportionately larger under representation of Blacks in the high ranked industries and over representation in the low ranked industries. It would then follow that those Canadian regions with the highest cross-product in the R minus-row/H-column cell TIMES the R plus-row/L-column cell would be comparatively poor job opportunity regions. Accordingly, at the less than grade nine and nine-thirteen level of schooling the Ontario region is a poor job opportunity region for Blacks.

(Occupations)

Table 11 on page 29 provides the occupation/education cases. The cases

in question for which sufficient data were reported to allow for the testing of proposition one occurred at the following education levels within the corresponding regions, as given below:

Education Levels	Regions
< 9	Ontario
9-13	All regions with the exception of B.C.
1-4	Ontario
5+	None

The number of eight-cell sets meeting the sufficient data guideline in this occupation/education matrix is six of a total of twenty sets. It is noticeable that proposition one is sustained in at least one-third of the cases in four of the six testable eight-cell sets. The four sets in question are identifiable as the cell-sets of the Atlantic and the Prairies--at the nine-thirteen level of education, and Ontario--at the less than nine grade level and the one-four years of university. Overall, proposition one is rejected in at least two-thirds of the valid cases in half of six testable eight-cell sets; thus supporting a similar conclusion to that drawn from the findings in Table 10, namely: non-labour market forces are--or at least were in 1971, significantly affecting the respective distributions of enumerated employed Blacks and/or all other employed Canadians.

Further, the cross-products[15] in Table 11 reveal that the strongest pull of the influential non-labour market forces is in the direction of under representation in the high ranked occupations and over representation in the low ranked occupations. This under/over representation pattern in question

15. The cross-product comparison in question refers to the R minus-row/H-column cell TIMES R plus-row/L-column cell versus the R minus-row/L-column cell TIMES R plus-row/H-column cell.

is most marked in the regions of Ontario and Quebec at the nine-thirteen level of education.

As a practical consideration, from the viewpoint of Blacks seeking employment with nine-thirteen years of schooling, an additional observation, apparent in Table 11, may be noted in this context. Let it be assumed that a good job opportunity region for Blacks is one with a number of high paying industries or occupations with proportionately equal occupational representation of Blacks and all other Canadians. Then, it follows that--as of 1971 certainly, the Atlantic and B.C., comparatively, are good regions, whereas Ontario and Quebec are poor regions for Black workers.

AGE RANGES

(Industries)

The industry/age cases are presented in Table 12 on page 30. The testable cases contained in Table 12 were observed at the following age ranges within the associated regions, as noted:

Age Ranges	Regions
15-24	Ontario
25-44	All regions
45-64	Ontario

In this industry/age matrix of fifteen eight-cell sets seven of the cell-sets meet the sufficient data standard. Proposition one is sustained in at least a third of the valid industry cases in three of the eight-cell sets; the sets in question being those of B.C., Prairies, and the Atlantic regions. When the industry/age matrix is considered in its entirety the picture that emerges is essentially the same one that may be observed in Tables 10 and 11 on pages 28 and 29 respectively, namely: proposition one is rejected in at least two-thirds of the valid cases in five of seven testable eight-cell sets. Hence,

the conclusion to be drawn is also the same: non-labour market forces are--or at least were in 1971, significantly affecting the respective distributions of enumerated employed Blacks and/or all other employed Canadians.

Except for the 25-44 eight cell set in the B.C. region there is no change in the direction of the strongest pull of the influential non-labour market forces. A comparison of the cross-products[16] in the "TOTALS" column and in six of the seven testable cell-sets bear out the marked under representation in the high ranked industries and over representation in the low ranked industries. Given the proportionately equal industry-representation yardstick, it follows that the more promising industry regions for Blacks in the 25-44 age range are B.C., Atlantic, and Prairies, in the order mentioned. (Occupations)

The occupation/age matrix is depicted in Table 13 on page 31. The cell-sets with sufficient data to permit testing of proposition one are observable at the following age ranges within the corresponding regions, as follows:

Age Ranges	Regions
15-24	Ontario
25-44	All regions
45-64	Quebec/Ontario

Of the fifteen cell-sets eight meet the sufficient data test. In three of the eight cell-sets proposition one is supported in over a third of the testable cases in each set. All of the three supporting cell-sets occurred at the twenty-five through forty-four age range. The regions manifesting support of proposition one in the proportion just noted are: (a) B.C.--reporting nine of thirteen testable cases. Six of the nine were high and

16. As specified in footnote 15 on page 34.

the remaining three were low ranked occupations; (b) Prairies--registering seven of thirteen testable cases. Three of the seven were high and the remaining four were low ranked occupations; and (c) the Atlantic--reporting four of eleven testable cases. One of the four was high and the remaining three were low ranked occupations. Overall, proposition one is rejected in over two thirds of the occupations in five of the eight testable cell-sets. The strongest pull of the influential non-labour market forces in this occupation/age matrix is also in the direction of proportionate under representation in the high ranked occupations and over representation in the low ranked occupations.

In this connection, using the proportionately equal occupation-representation standard, Blacks' employment opportunity in the twenty-five through forty-four age range is, or at least was as of 1971, more promising in B.C., Prairies, and Atlantic regions. Correspondingly, let it be assumed that the best job opportunity regions for Blacks are those with the largest number of high paying occupations and/or industries in which Blacks are over represented. Then it follows that those Canadian regions with the highest frequency counts in the R plus-row/H-column cell hold the best promise, comparatively, for Blacks. Consequently, the occupation/age matrix depicted in Table 13 reveals the best job opportunity regions in Canada for Blacks in the twenty-five through forty-four age range to be the Atlantic and Quebec regions. To identify the occupations involved in these two best job opportunity regions, at the prime age range in question, it is necessary to consult Fig. 9.2.1 on page 95 to identify the over representation cases among the high ranked occupations. The high ranked industries or occupations are separated from the low ranked ones by a heavy drawn horizontal line. Those cases above the line are the highest ranked and those cases below the line

are the lowest ranked industries or occupations. Having identified the over representation cases, one then checks their corresponding rank identifications in the associated Table, also numbered in this instance 9.2.1 and appearing on page 94. Accordingly, in the Atlantic, at the prime age range in question, the three high ranked occupations with over representation of Blacks are teaching, service, and medicine/health. In Quebec, at this age range, the three high ranked occupations with over representation of Blacks are TSRA, teaching, and medicine/health.

When Tables 10-13 (pages 28-31) are utilized in conjunction with Figs. 6.1.1 - 9.3.1 (pages 47-99) and their corresponding Tables 6.1.1 - 9.3.1 (pages 46-98), in the manner suggested above, the matrices of classified decisions are capable of yielding answers to a wide variety of questions of interest to Canadian Blacks in particular and all other Canadians in general. Representative of the types of questions Canadian Blacks might be interested in extracting answers to, from the respective matrices, are the following: (a) given a Canadian Black with a specific skill where might he move to maximize his job potential opportunities? Or, suppose one is looking for a job in a specific type occupation/industry, which region offers the best opportunities?; (b) given a Canadian Black living in a specific Canadian region what occupation/industry do I train for at what level of education, in order to maximize my job potential opportunities?; (c) where is the greatest <u>range</u> of occupation/industry opportunities for Blacks in Canada?; (d) in what occupations/industries do the best career opportunities presently lie for Blacks at a given educational level?; (e) where might my organization most effectively expend its resources in its efforts to open up job opportunities for Canadian Blacks in a given region?; etc., etc., etc.

Before concluding this report, closing comments are necessary on four

issues. The issues in question are: (a) The inapplicability of the findings communicated in this report for inferring the industry/occupation distributions of native Black Canadians; (b) The inexactness of the title of this report; (c) The reliability of the decisions reached through the application of the decision grid; and (d) The barrier that precludes effective processing of the decision category, labeled "insufficient data". Each of these issues will be commented on briefly in the order mentioned.

a. It is necessary to emphasize that the findings communicated in this report are not known to be applicable to the native Black Canadian population. The reasons for this restriction are discussed in Appendix B, on pages 104-107.

b. A comprehensive--and of course more accurate, portrayal of a racial/ethnic group's socio-economic position in a society entails an assessment of a group's position in: (i) the occupation/industry matrix; (ii) the position the group occupies on the influential commissions, boards, trustees, task forces, etc.; (iii) the group's position in the influential politico-economic formal organizations; and of course (iv) the types and respective amounts of collectively held wealth. In the light of the preceding considerations the title of this preliminary report is of course a misnomer, and at best only one major indicator of socio-economic position.

c. In the application of the conditions for decision, as specified on page 15, there is no equivocality revealed either through repeated applications on the same odds ratios or applications by different evaluators of the same odds ratios. There is, of course, the reliability iasue posed by the extent of type I or

type II errors as a function of the decision conditions chosen. The latter issue will be addressed when validity is considered in a final report.

d. Although the "insufficient data" category is still under study, it appears that the reported 1-19 industry or occupation frequencies for Blacks (see "b_1" on page 15) are beyond effective massaging. Given the barrier of the confidentiality issue, it is not likely the researchers will be able to determine which of the small frequencies are aggregates; and hence aggregates of what frequencies involving how many units (i.e., census tracts and/or enumeration areas).[17]

17. For a discussion of the technique used by the Census Division to guard against illegal disclosure of information relating to individuals see: Murphy, E.M.; "The Random Rounding Technique for Guarding Against Illegal Disclosure in Published Census Tables", Statistics Canada, May 29, 1972; and Stinson, J.G.; "Effects of Random Rounding on User Aggregated Date", Data Dissemination Section, Statistics Canada, February, 1973.

TABLE 4

REGIONAL COMPARISONS IN NUMBER AND PERCENT OF EMPLOYED CANADIAN ENUMERATED BLACKS WITH ALL OTHER EMPLOYED CANADIANS, 15-64 YEARS OF AGE, IN EACH OF FOUR EDUCATIONAL GRADE LEVELS

CANADIAN REGIONS		EDUCATION GRADE LEVELS									
		LESS THAN GRADE 9		GRADES 9-13		1-4 YRS. UNIV.		5+ YRS.UNIV.		TOTAL	
		N	%	N	%	N	%	N	%	N	%*
ATLANTIC REGION	BLACKS	730	46	670	42	120	8	75	5	1,595	neg.
	ALL OTHERS	185,445	31	327,740	55	59,185	10	22,485	4	594,855	100
QUEBEC REGION	BLACKS	580	13	2,505	54	1,080	23	475	10	4,640	neg.
	ALL OTHERS	680,540	35	984,075	50	206,765	11	86,870	4	1,958,250	100
ONTARIO REGION	BLACKS	2,325	13	12,915	70	2,180	12	1,010	5	18,430	.01
	ALL OTHERS	720,965	24	1,891,020	62	341,630	11	109,800	4	3,063.415	99
PRAIRIE REGION	BLACKS	230	11	1,265	60	345	16	265	13	2,105	neg.
	ALL OTHERS	319,445	24	821,590	61	162,325	12	47,980	4	1,351,340	100
B.C. REGION	BLACKS	105	11	525	56	165	18	145	15	940	neg.
	ALL OTHERS	146,715	18	534,705	65	102,380	12	39,115	5	822,915	100
TOTALS		2,057,080	26	4,577,010	59	876,175	11	308,220	4	7,818,485	

SOURCE: STATISTICS CANADA CUSTOM TABULATION FROM THE 1971 CENSUS POPULATION AND HOUSING DATA BASE

* percent of grand total (i.e., Blacks + All Others)

TABLE 5

REGIONAL COMPARISONS IN NUMBER AND PERCENT OF EMPLOYED CANADIAN ENUMERATED BLACKS WITH ALL OTHER EMPLOYED CANADIANS IN EACH OF THREE AGE RANGES, 1971

CANADIAN REGIONS		AGE RANGES							
		15-24		25-44		45-64		TOTAL	
		N	%	N	%	N	%	N	%*
ATLANTIC REGION	BLACKS	340	21	825	52	430	27	1,595	0.3
	ALL OTHERS	156,575	26	254,375	43	183,905	31	594,866	99.7
QUEBEC REGION	BLACKS	725	16	3,335	72	580	13	4,640	0.3
	ALL OTHERS	489,155	25	916,895	47	552,190	28	1,958,240	99.7
ONTARIO REGION	BLACKS	3,490	19	12,775	69	2,155	12	18,420	.01
	ALL OTHERS	727,450	24	1,380,540	45	955,440	31	3,063,430	99.
PRAIRIE REGION	BLACKS	440	14	2,420	78	225	7	3,085	neg.
	ALL OTHERS	351,100	26	572,355	42	427,870	32	1,351,325	100
B.C. REGION	BLACKS	120	13	685	72	145	15	950	neg.
	ALL OTHERS	196,800	24	365,145	44	260,970	32	822,915	100
TOTAL		1,928,195	25	3,509,350	45	2,383,910	30	7,821,455	

SOURCE: STATISTICS CANADA CUSTOM TABULATION FROM THE 1971 CENSUS POPULATION AND HOUSING DATA BASE

* percent of grand total (i.e., Blacks + All Others)

TABLE 4.1

TABLE 4'S REGIONAL COMPARISONS OF PROPORTIONATE FREQUENCIES OF BLACKS/ALL OTHERS AT EACH EDUCATIONAL GRADE LEVEL: REPRESENTED HERE IN TERMS OF THE CLASSIFICATIONS EMERGING FROM THE DECISION GRID (I.E. CONDITIONS) INVOLVING THE ODDS RATIO, ITS STANDARD ERROR, AND CHI SQUARE WITH SIGNIFICANCE LEVEL SET AT 0.01

EDUCATIONAL GRADE LEVELS	CANADIAN REGIONS				
	ATLANTIC	QUEBEC	ONTARIO	PRAIRIES	B.C.
LESS THAN GRADE 9	+	-	-	-	-
GRADES 9-13	-	+	+	-	-
1-4 YRS. UNIV.	-	+	+	+	+
5+ YRS. UNIV.	0	+	+	+	+

TABLE 5.1

TABLE 5'S REGIONAL COMPARISONS OF PROPORTIONATE FREQUENCIES OF BLACKS/ALL OTHERS AT EACH AGE RANGE: REPRESENTED HERE IN TERMS OF THE CLASSIFICATIONS EMERGING FROM THE DECISION GRID (I.E. CONDITIONS) INVOLVING THE ODDS RATIO, ITS STANDARD ERROR, AND CHI SQUARE WITH SIGNIFICANCE LEVEL SET AT 0.01

AGE RANGES	CANADIAN REGIONS				
	ATLANTIC	QUEBEC	ONTARIO	PRAIRIES	B.C.
15-24	-	-	-	-	-
25-44	+	+	+	+	+
45-64	-	-	-	-	-

H_o: $\phi = 1$

$p = 0.01$

Symbol Legend

0 = The null is sustained
- = The null is rejected Blacks "under" represented
+ = The null is rejected Blacks "over" represented

TABLE 6.1

INDUSTRIES BY REGIONS: EMPLOYED WITH LESS THAN GRADE 9

CANADIAN INDUSTRIES	CANADIAN REGIONS				
	ATLANTIC	QUEBEC	ONTARIO	PRAIRIES	B.C.
AGRICULTURE	0 (20-6080)	Δ	*	*	Δ
FORESTRY	*	Δ	Δ	Δ	*
FISHERIES	Δ	Δ	Δ	Δ	Δ
MINING	*	*	*	*	Δ
MANUFACTURING	- (75-36665)	- (85-195495)	- (610-222040)	+ (50-35080)	*
CONSTRUCTION	+ (145-21675)	*	- (80-76890)	0 (20-27760)	*
TRANSPORTATION	- (50-19870)	0 (60-58520)	- (110-50570)	+ (35-26090)	*
TRADE	- (45-21230)	- (20-89045)	0 (240-85815)	*	*
FINANCE	*	*	+ (55-10610)	Δ	Δ
SERVICE	+ (185-27035)	+ (280-108970)	+ (830-117880)	+ (60-50760)	+ (45-26075)
PUBLIC	0 (50-12835)	*	- (45-29925)	Δ	Δ
NOT DETERMINED	+ (120-16545)	+ (105-70560)	+ (335-59130)	+ (40-26490)	*

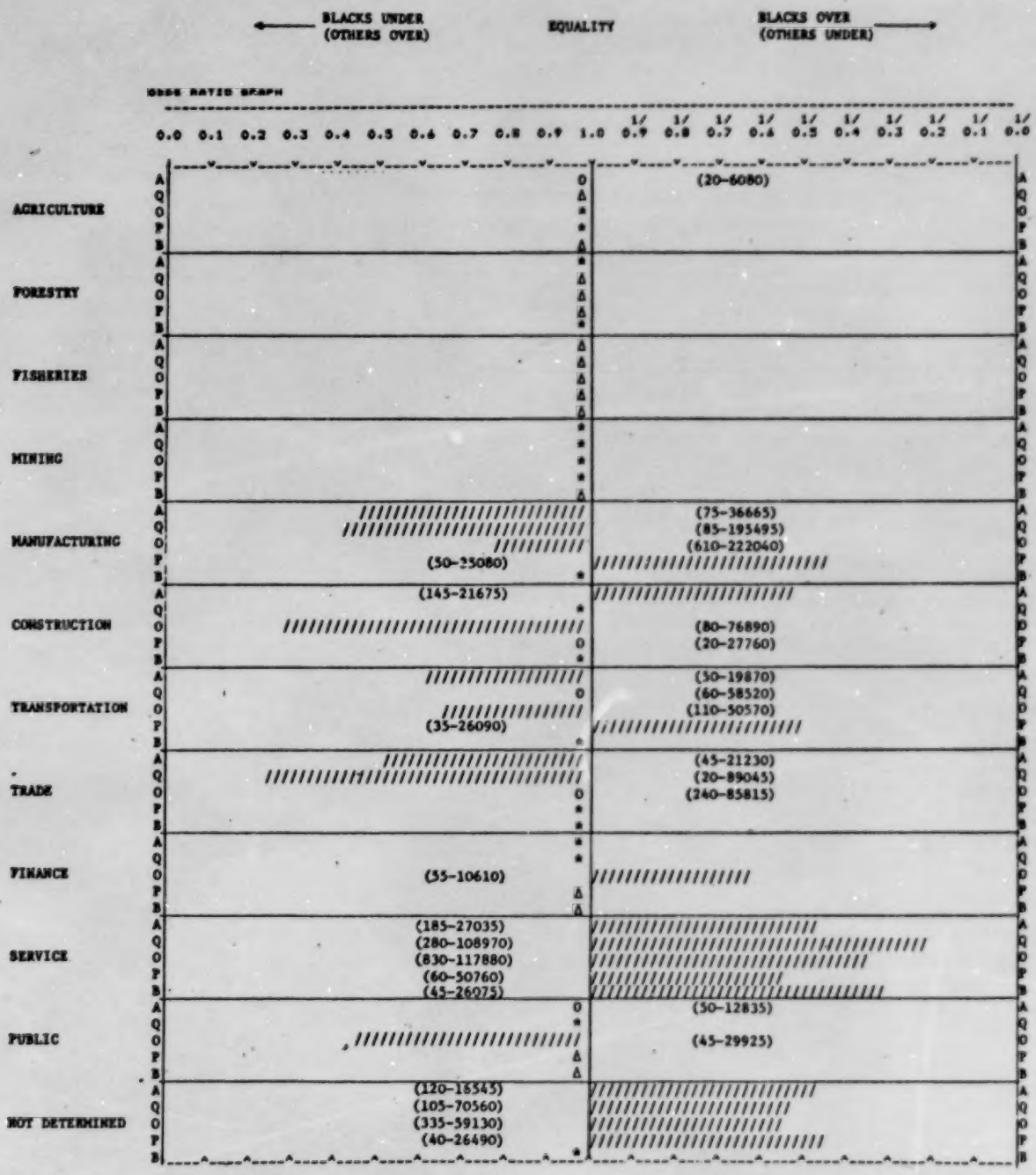
H_o: $\phi = 1$
$p = 0.01$

N = (Blacks .. Others)

Symbol Legend

Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
0 = The null is sustained
- = The null is rejected: Blacks "under" represented
+ = The null is rejected: Blacks "over" represented

FIG. 5.1 — INDUSTRIES BY REGIONS: EMPLOYED WITH LESS THAN GRADE 9



H_0: $\phi = 1$

$p = 0.01$

Symbol Legend:
Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
O = The null is sustained

N = (Blacks .. Others)

Region Legend:
A = Atlantic
Q = Quebec
O = Ontario
P = Prairies
B = British Columbia

Table 6.1.1 ... RANK LOCATIONS OF INDUSTRIES ACCORDING TO AVERAGE ANNUAL INCOME; WITH THE CORRESPONDING PER CENT WHICH EACH INDUSTRY REPRESENTS OF THE STATED LABOUR FORCE POPULATION: EMPLOYED WITH LESS THAN GRADE 9.

Industry Ranks	CANADIAN REGIONS									
	Atlantic		Quebec		Ontario		Prairies		B.C.	
	Industries	%	Industries	%	Industries	%	Industries	%	Industries	%
1	Public	7	Mining	2	Mining	2	Mining	2	Mining	2
2	Mining	3	Transport	9	Transport	7	Transport	8	Transport	10
3	Transport	11	Public	4	Construct.	11	Construct.	9	Forestry	5
4	Construct.	12	Finance	1	Public	4	Manuf.	11	Manuf.	22
5	Finance	.5	Construct.	8	Forestry	.5	Public	5	Construct.	11
6	Manuf.	20	Manuf.	29	Manuf.	31	Finance	1	Public	4
7	Trade	11	Trade	13	Finance	1	Trade	11	Finance	1
8	Forestry	4	Forestry	2	Trade	12	Service	16	Trade	11
9	Not Deter.	9	Service	16	Service	16	Forestry	.5	Fishing	.8
10	Service	15	Not Deter.	10	Not Deter.	8	Not Deter.	8	Service	18
11	Fisheries	5	Fisheries	.2	Fisheries	.1	Fisheries	.2	Not Deter.	10
12	Agric.	3	Agric.	6	Agric.	7	Agric.	29	Agric.	5

Abbreviations

Transport = Transportation

Construct. = Construction

Manuf. = Manufacturing

Not Deter. = Not determined

Agric. = Agriculture

FIG. 6.1.1 —— RANK LOCATIONS OF INDUSTRIES BY REGIONS: EMPLOYED WITH LESS THAN GRADE 9

INDUSTRY RANKS	ATLANTIC U	ATLANTIC E	ATLANTIC ⊖	QUEBEC U	QUEBEC E	QUEBEC ⊖	ONTARIO U	ONTARIO E	ONTARIO ⊖	PRAIRIES U	PRAIRIES E	PRAIRIES ⊖	BRITISH COLUMBIA U	BRITISH COLUMBIA E	BRITISH COLUMBIA ⊖
1		0	50 12835		*			*			*			Δ	
2		*			0	60 58520	///		110 50570	35 26090		/////		*	
3		////	50 19870		*		///////		80 76890		0	20 27760		*	
4	145 21675		/////		*		/////		45 29925	50 35080		//////		*	
5		*			*			Δ			Δ			*	
6		/////	75 36665		//////	85 195495	//		610 222040		Δ			Δ	
7		/////	45 21230		////////	20 89045	55 10610	////			*			Δ	
8		*			Δ			0	240 85815	60 50760		/////		*	
9	120 16545		/////	280 108970		////////	830 117880	//////			Δ			Δ	
10	185 27035		/////	105 70360		/////	335 59130	/////		40 26490		//////	45 26075		///////
11		Δ			Δ			Δ			Δ			*	
12		0	20 6080		Δ			*			*			Δ	

53

H_o ϕ = 1

Symbol Legend
Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
0 = The null is sustained

Legend
U = Blacks "under" represented
E = Equality
⊖ = Blacks "over" represented
N = Blacks / Others

Bar Scale: One stroke = 0.1 odds ratio distance from equality line (e.g., 3 strokes = .700 odds ratio; 6 strokes = .400 odds ratio)

TABLE 6.2

INDUSTRIES BY REGIONS: EMPLOYED 9-13 YRS. OF SCHOOLING

CANADIAN INDUSTRIES	CANADIAN REGIONS				
	ATLANTIC	QUEBEC	ONTARIO	PRAIRIES	B.C.
AGRICULTURE	Δ	*	- (30-59880)	- (30-112900)	*
FORESTRY	Δ	Δ	Δ	Δ	*
FISHERIES	Δ	Δ	Δ	Δ	Δ
MINING	Δ	*	- (50-19400)	0 (35-22915)	*
MANUFACTURING	0 (75-42700)	0 (520-214095)	- (2920-462200)	+ (220-80350)	0 (90-86280)
CONSTRUCTION	0 (40-19890)	- (25-39555)	- (350-95600)	0 (70-47320)	0 (30-35675)
TRANSPORTATION	- (40-33240)	0 (240-83415)	+ (1095-136715)	- (95-78785)	+ (80-56200)
TRADE	- (60-63245)	- (220-152470)	- (1260-326845)	- (130-149210)	- (50-101035)
FINANCE	0 (20-12425)	- (120-59430)	+ (945-108735	- (20-37635)	0 (25-28570)
SERVICE	+ (220-68920)	+ (960-229425)	+ (4225-398350)	+ (465-164620)	+ (165-112840)
PUBLIC	+ (120-43685)	- (40-77510)	0 (1010-149215)	- (75-68940)	0 (30-37530)
NOT DETERMINED	+ (100-24000)	+ (380-90755)	+ (1030-130685)	+ (145-57270)	0 (30-41395)

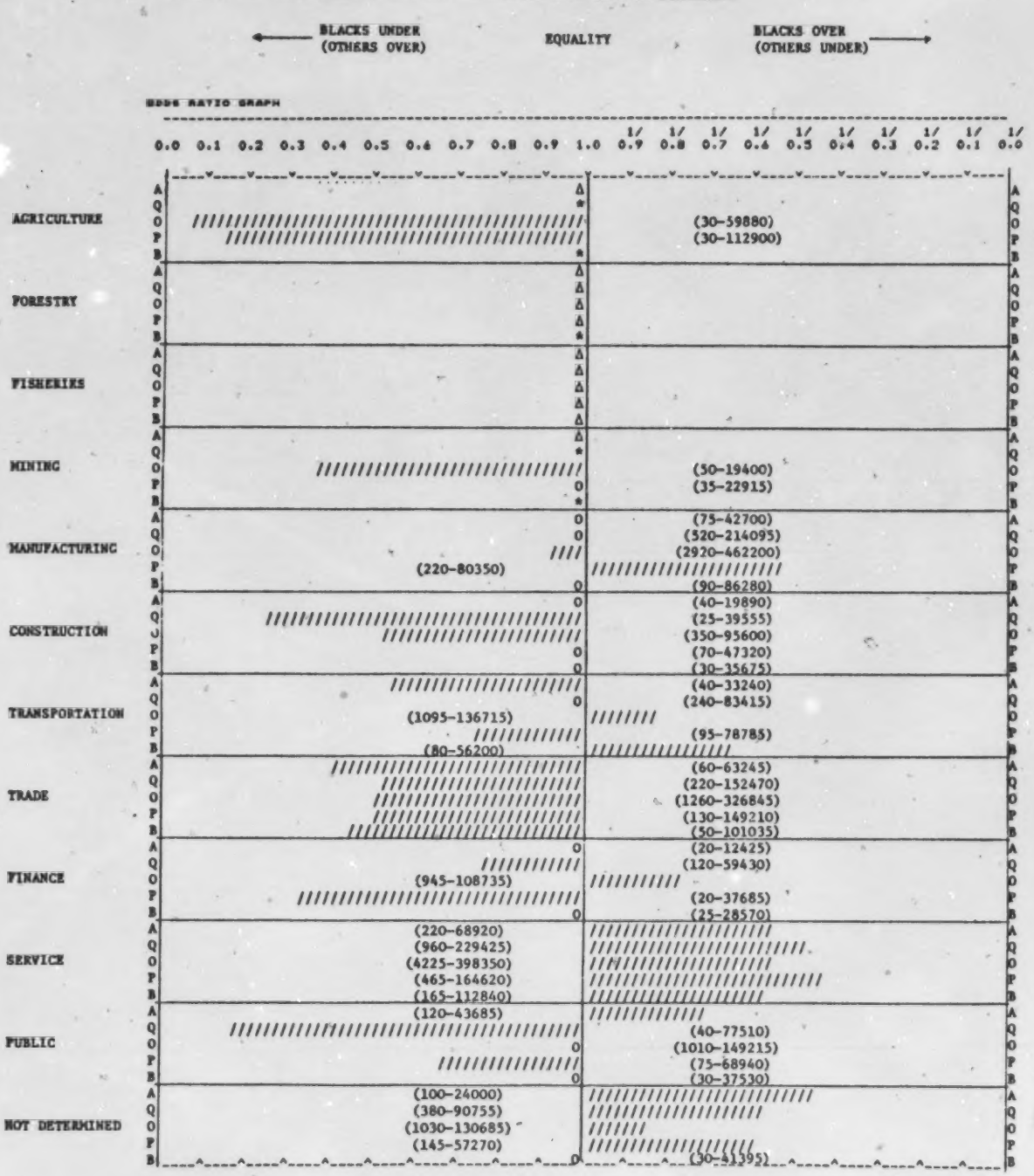
H_o: $\phi = 1$
$p = 0.01$

N = (Blacks .. Others)

Symbol Legend

Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
0 = The null is sustained
- = The null is rejected: Blacks "under" represented
+ = The null is rejected: Blacks "over" represented

FIG. 6.2 — INDUSTRIES BY REGIONS: EMPLOYED 9-13 YRS. OF SCHOOLING



H_o: $\phi = 1$

$p = 0.01$

Symbol Legend:
Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
O = The null is sustained

N = (Blacks .. Others)

Region Legend:
A = Atlantic
Q = Quebec
O = Ontario
P = Prairies
B = British Columbia

Table 6.2.1 ... RANK LOCATIONS OF INDUSTRIES ACCORDING TO AVERAGE ANNUAL INCOME; WITH THE CORRESPONDING PER CENT WHICH EACH INDUSTRY REPRESENTS OF THE STATED LABOUR FORCE POPULATION: EMPLOYED 9-13 YRS. OF SCHOOLING.

Industry Ranks	CANADIAN REGIONS									
	Atlantic		Quebec		Ontario		Prairies		B.C.	
	Industries	%	Industries	%	Industries	%	Industries	%	Industries	%
1	Mining	2	Mining	1	Transport	7	Fisheries	Neg	Transport	11
2	Public	13	Transport	8	Mining	1	Mining	3	Mining	1
3	Transport	10	Public	8	Public	8	Transport	10	Forestry	3
4	Finance	4	Construct.	4	Construct.	5	Construct.	6	Public	7
5	Construct.	6	Manuf.	22	Manuf.	24	Public	8	Manuf.	16
6	Manuf.	13	Finance	6	Forestry	.2	Manuf.	10	Construct.	7
7	Forestry	.9	Trade	15	Finance	6	Forestry	.2	Finance	5
8	Trade	19	Service	23	Trade	17	Finance	5	Trade	19
9	Service	21	Not Deter.	9	Service	21	Trade	18	Not Deter.	8
10	Not Deter.	7	Forestry	.5	Not Deter.	7	Service	20	Service	21
11	Fisheries	1	Fisheries	.1	Agric.	3	Not Deter.	7	Fisheries	.3
12	Agric.	2	Agric.	2	Fisheries	Neg.	Agric.	14	Agric.	2

FIG. 6.2.1 --- RANK LOCATIONS OF INDUSTRIES BY REGIONS: EMPLOYED 9-13 YRS OF SCHOOLING

INDUSTRY RANKS	ATLANTIC U	ATLANTIC E	ATLANTIC ⊖	QUEBEC U	QUEBEC E	QUEBEC ⊖	ONTARIO U	ONTARIO E	ONTARIO ⊖	PRAIRIES U	PRAIRIES E	PRAIRIES ⊖	BRITISH COLUMBIA U	BRITISH COLUMBIA E	BRITISH COLUMBIA ⊖
1		Δ			*		1095/136715	//			Δ		80/56200	///	
2	120/43685	///			0	240/83415	//////	50/19400			0	35/22915		*	
3		////	40/33240		////////	40/77510		0	1010/149215		//	95/78785		*	
4		0	20/12425		////////	25/39555	/////	350/95600			0	70/47320		0	30/37530
5		0	40/19890		0	520/214095		/	2920/462200		///	75/68940		0	90/86280
6		0	75/42700		//	120/59430		Δ		220/80350		/////		0	30/35675
7		Δ			/////	220/152470	945/108735	//			Δ			0	25/28570
8		//////	60/63245	960/229425		/////		/////	1260/326845		///////	20/37685		/////	50/101035
9	220/68920		////	380/90755		////	4225/398350	/////			/////	130/149210		0	30/41395
10	100/24000		/////		Δ		1030/130685	/		465/164620		//////	165/112840		////
11		Δ			Δ			//////////	30/59880	145/57270		////		Δ	
12		Δ			*			Δ			////////	30/112900		*	

H_o $\phi = 1$

Symbol Legend
Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
0 = The null is sustained

Legend
U = Blacks "under" represented
E = Equality
⊖ = Blacks "over" represented
N = Blacks / Others

Bar Scale: One stroke = 0.1 odds ratio distance from equality line (e.g., 3 strokes = .700 odds ratio; 6 strokes = .400 odds ratio)

TABLE 6.3

INDUSTRIES BY REGIONS: EMPLOYED WITH 1-4 YRS. OF UNIVERSITY

CANADIAN INDUSTRIES	CANADIAN REGIONS				
	ATLANTIC	QUEBEC	ONTARIO	PRAIRIES	B.C.
AGRICULTURE	Δ	Δ	*	Δ	Δ
FORESTRY	Δ	Δ	Δ	Δ	*
FISHERIES	Δ	Δ	Δ	Δ	Δ
MINING	Δ	Δ	*	*	Δ
MANUFACTURING	*	0 (185-34835)	- (300-60625)	0 (25-12095)	0 (20-12720)
CONSTRUCTION	*	*	- (40-11430)	0 (20-6095)	Δ
TRANSPORTATION	Δ	0 (70-13795)	+ (145-18120)	0 (25-9885)	0 (20-8710)
TRADE	*	0 (90-22340)	- (130-37105)	0 (35-19315)	*
FINANCE	Δ	0 (75-13455)	0 (155-21475)	Δ	*
SERVICE	+ (65-25500)	+ (575-88110)	+ (1025-133990)	0 (165-68870)	+ (80-38860)
PUBLIC	*	- (20-19000)	0 (285-39640)	0 (50-18385)	*
NOT DETERMINED	*	0 (35-7770)	+ (85-9315)	*	*

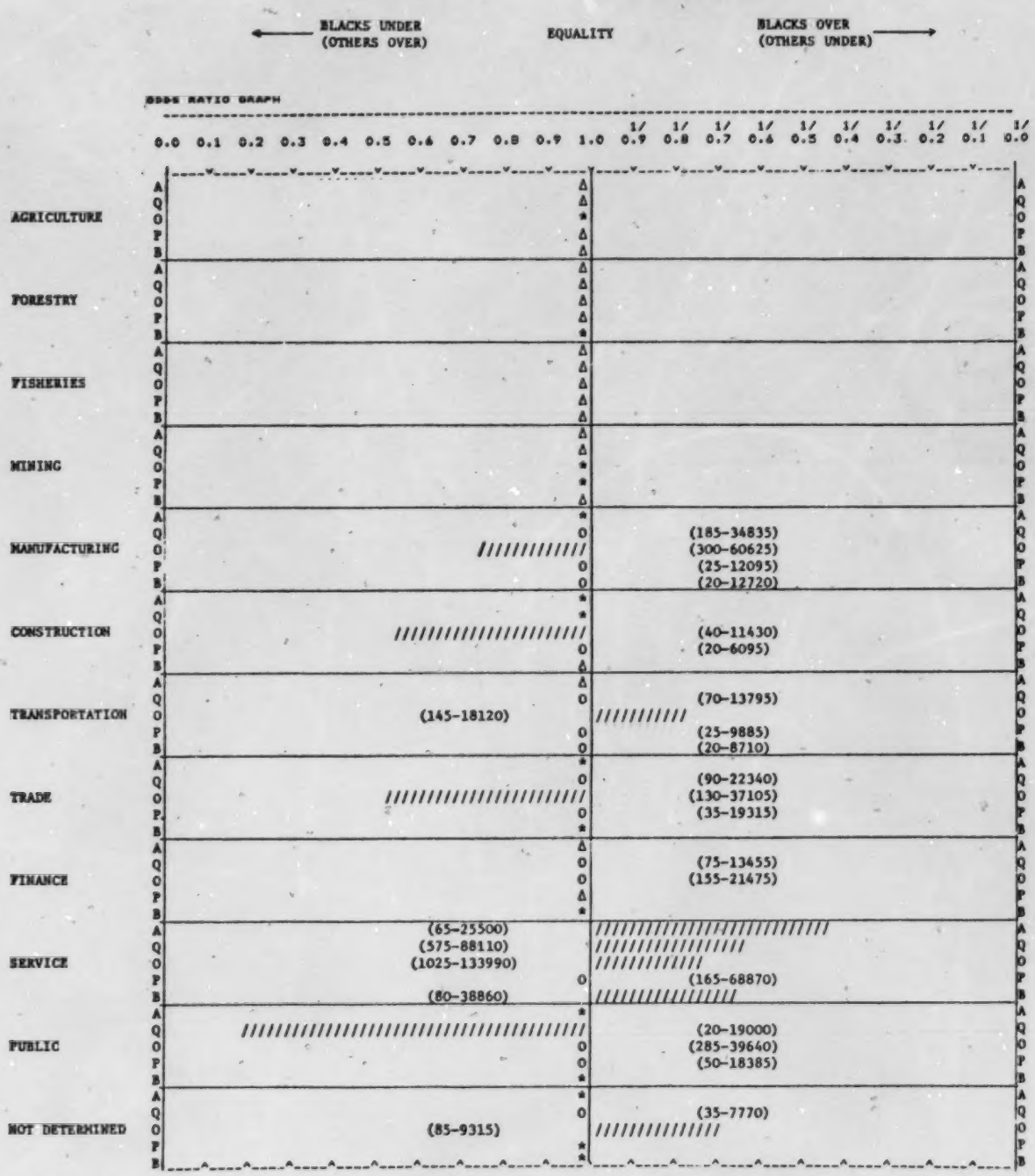
H_o: $\phi = 1$
$p = 0.01$

N = (Blacks .. Others)

Symbol Legend

Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
0 = The null is sustained
- = The null is rejected: Blacks "under" represented
+ = The null is rejected: Blacks "over" represented

FIG. 6.3 — INDUSTRIES BY REGIONS: EMPLOYED WITH 1-4 YRS. OF UNIVERSITY



H_o: $\phi = 1$

$p = 0.01$

Symbol Legend:
Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
O = The null is sustained

N = (Blacks .. Others)

Region Legend:
A = Atlantic
Q = Quebec
O = Ontario
P = Prairies
B = British Columbia

Table 6.3.1 ... RANK LOCATIONS OF INDUSTRIES ACCORDING TO AVERAGE ANNUAL INCOME; WITH THE CORRESPONDING PER CENT WHICH EACH INDUSTRY REPRESENTS OF THE STATED LABOUR FORCE POPULATION: EMPLOYED WITH 1-4 YRS. OF UNIVERSITY.

Industry Ranks	CANADIAN REGIONS									
	Atlantic		Quebec		Ontario		Prairies		B.C.	
	Industries	%	Industries	%	Industries	%	Industries	%	Industries	%
1	Mining	1	Transport	7	Manuf.	18	Mining	4	Fisheries	.3
2	Forestry	.6	Finance	7	Forestry	.2	Manuf.	7	Transport	9
3	Public	15	Public	9	Public	12	Public	11	Public	8
4	Finance	5	Manuf.	17	Transport	5	Finance	4	Manuf.	12
5	Construct.	4	Mining	.7	Finance	6	Transport	6	Finance	6
6	Service	43	Trade	11	Trade	11	Trade	12	Mining	2
7	Manuf.	8	Construct.	2	Construct.	3	Service	42	Service	38
8	Transport	7	Service	43	Service	39	Construct.	4	Construct.	4
9	Trade	12	Not Deter.	4	Mining	1	Not Deter.	3	Trade	14
10	Fisheries	.4	Forestry	.2	Not Deter.	3	Forestry	.2	Forestry	2
11	Agric.	1	Fisheries	Neg.	Agric.	2	Agric.	6	Agric.	1
12	Not Deter.	3	Agric.	.7	Fisheries	Neg.	Fisheries	Neg.	Not Deter.	3

FIG. 6.3.1 — RANK LOCATIONS OF INDUSTRIES BY REGIONS: EMPLOYED WITH 1-4 YRS. OF UNIVERSITY

INDUSTRY RANKS	ATLANTIC U	ATLANTIC E	ATLANTIC Θ	QUEBEC U	QUEBEC E	QUEBEC Θ	ONTARIO U	ONTARIO E	ONTARIO Θ	PRAIRIES U	PRAIRIES E	PRAIRIES Θ	BRITISH COLUMBIA U	BRITISH COLUMBIA E	BRITISH COLUMBIA Θ
1		Δ			0	70 13795		///	300 60625		*			Δ	
2		Δ			0	75 13455		Δ			0	25 12095		0	20 8710
3		*			////////	20 19000		0	285 39640		0	50 18385		*	
4		Δ			0	185 34835	145 18120	//			Δ			0	20 12720
5		*			Δ			0	155 21475		0	25 9885		*	
6	65 25500		//////		0	90 22340		/////	130 37105		0	35 19315		Δ	
7		*			*			/////	40 11430		0	165 68870	80 38860		///
8		Δ		575 88110		////	1025 133990	///			0	20 6095		Δ	
9		*			0	35 7770		*			*			*	
10		Δ			Δ		85 9315	///			Δ			*	
11		Δ			Δ			*			Δ			Δ	
12		*			Δ			Δ			Δ			*	

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H_o $\phi = 1$

Symbol Legend
Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
0 = The null is sustained

Legend
U = Blacks "under" represented
E = Equality
Θ = Blacks "over" represented
N = Blacks / Others

Bar Scale: One stroke = 0.1 odds ratio distance from equality line (e.g., 3 strokes = .700 odds ratio; 6 strokes = .400 odds ratio)

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TABLE 6.4

INDUSTRIES BY REGIONS: EMPLOYED WITH 5+ YRS. OF UNIVERSITY

CANADIAN INDUSTRIES	CANADIAN REGIONS				
	ATLANTIC	QUEBEC	ONTARIO	PRAIRIES	B.C.
AGRICULTURE	Δ	*	*	Δ	Δ
FORESTRY	Δ	Δ	Δ	Δ	Δ
FISHERIES	Δ	Δ	Δ	Δ	Δ
MINING	Δ	Δ	*	*	*
MANUFACTURING	*	- (35-10655)	- (65-11735)	*	*
CONSTRUCTION	Δ	*	*	Δ	Δ
TRANSPORTATION	Δ	*	0 (20-2890)	*	Δ
TRADE	*	*	0 (35-3920)	*	*
FINANCE	Δ	*	*	Δ	*
SERVICE	0 (75-15425)	+ (360-50825)	+ (685-66915)	0 (200-32590)	0 (100-26250)
PUBLIC	*	0 (45-8685)	0 (140-15075)	0 (30-5255)	+ (20-2710)
NOT DETERMINED	Δ	*	0 (25-2425)	*	*

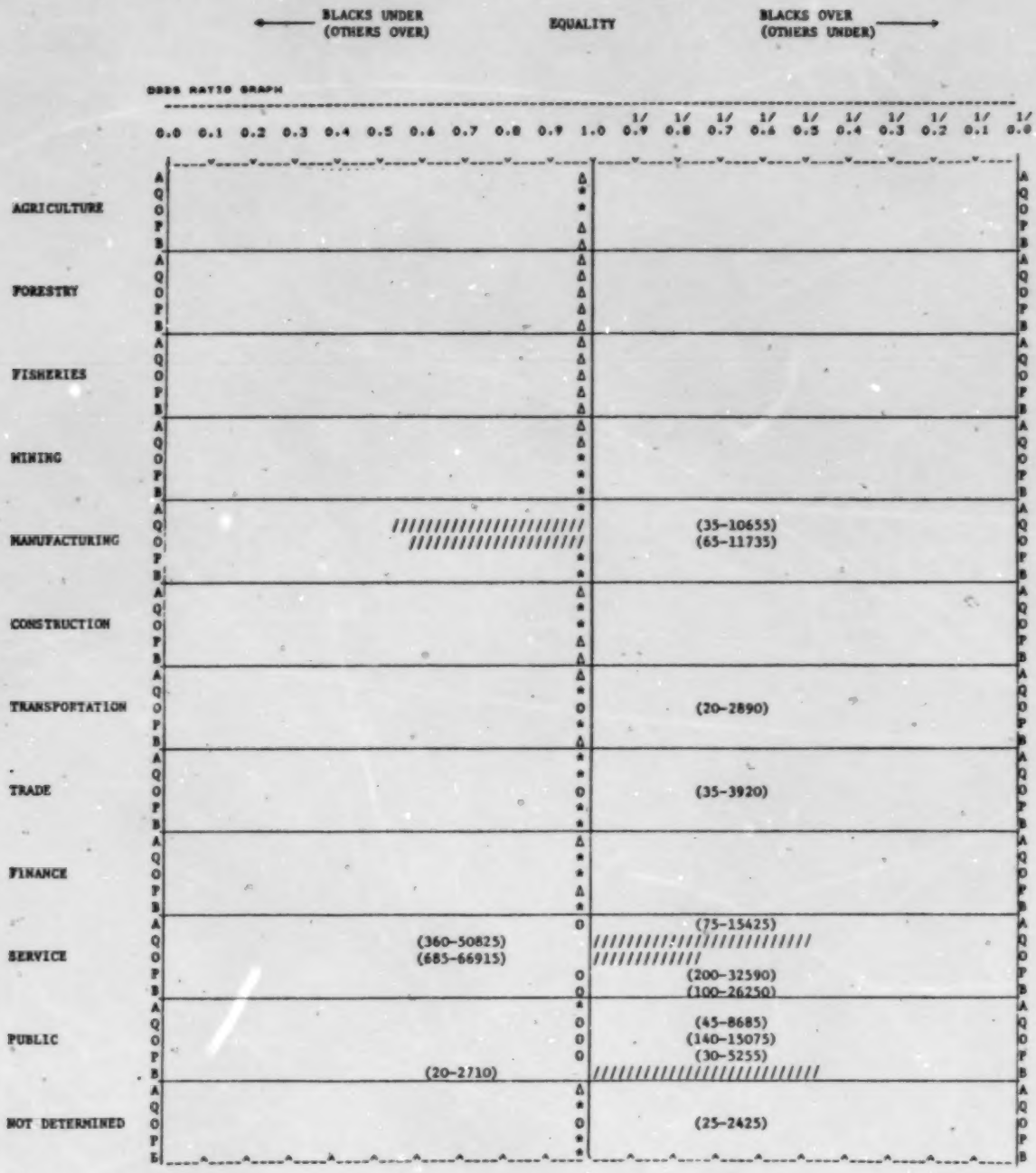
H_o: $\phi = 1$
$p = 0.01$

N = (Blacks .. Others)

Symbol Legend

Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
0 = The null is sustained
- = The null is rejected: Blacks "under" represented
+ = The null is rejected: Blacks "over" represented

FIG. 6.4 — INDUSTRIES BY REGIONS: EMPLOYED WITH 5+ YRS. OF UNIVERSITY



H_o: $\phi = 1$

$p = 0.01$

Symbol Legend:
Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
O = The null is sustained

N = (Blacks .. Others)

Region Legend:
A = Atlantic
Q = Quebec
O = Ontario
P = Prairies
B = British Columbia

Table 6.4.1 ... RANK LOCATIONS OF INDUSTRIES ACCORDING TO AVERAGE ANNUAL INCOME; WITH THE CORRESPONDING PER CENT WHICH EACH INDUSTRY REPRESENTS OF THE STATED LABOUR FORCE POPULATION: EMPLOYED WITH 5+ YRS. OF UNIVERSITY.

Industry Ranks	CANADIAN REGIONS									
	Atlantic		Quebec		Ontario		Prairies		B.C.	
	Industries	%	Industries	%	Industries	%	Industries	%	Industries	%
1	Mining	1	Agric.	.5	Forestry	.1	Public	11	Public	7
2	Manuf.	4	Finance	3	Mining	.8	Mining	5	Trade	5
3	Transport	4	Public	10	Public	14	Finance	2	Transport	4
4	Public	14	Construct.	2	Transport	3	Not Deter.	2	Finance	3
5	Finance	1	Transport	5	Manuf.	11	Service	68	Construct.	2
6	Construct.	2	Manuf.	12	Trade	4	Transport	2	Fisheries	.2
7	Service	69	Mining	.6	Finance	3	Trade	4	Manuf.	7
8	Trade	3	Service	59	Service	61	Agric.	2	Mining	2
9	Not Deter.	2	Trade	5	Construct.	2	Manuf.	3	Service	67
10	Fisheries	.1	Not Deter.	3	Not Deter.	2	Construct.	1	Forestry	1
11	Forestry	.4	Forestry	.2	Agric.	.9	Forestry	.1	Agric.	.9
12	Agric.	.4	Fisheries	Neg.	Fisheries	0	Fisheries	Neg.	Not Deter.	2

FIG. 6.4.1 —— RANK LOCATIONS OF INDUSTRIES BY REGIONS: EMPLOYED WITH 5+ YRS. OF UNIVERSITY

INDUSTRY RANKS	ATLANTIC U	ATLANTIC E	ATLANTIC ⊖	QUEBEC U	QUEBEC E	QUEBEC ⊖	ONTARIO U	ONTARIO E	ONTARIO ⊖	PRAIRIES U	PRAIRIES E	PRAIRIES ⊖	BRITISH COLUMBIA U	BRITISH COLUMBIA E	BRITISH COLUMBIA ⊖
1		Δ			*			Δ			O	30/5255	20/2710		/////
2		*			*			*			*			*	
3		Δ			O	45/8685		O	140/15075		Δ			Δ	
4		*			*			O	20/2890		*			*	
5		Δ			*			////	65/11735		O	200/32590		Δ	
6		Δ			/////	35/10655		O	35/3920		*			Δ	
7		O	75/15425		Δ			*			*			*	
8		*		360/50825		/////	685/66915		///		Δ			*	
9		Δ			*			*			*			O	100/26250
10		Δ			*			O	25/2425		Δ			Δ	
11		Δ			Δ			*			Δ			Δ	
12		Δ			Δ			Δ			Δ			*	

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H_o $\phi = 1$

Symbol Legend
Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
O = The null is sustained

Legend
U = Blacks "under" represented
E = Equality
⊖ = Blacks "over" represented
N = Blacks / Others

Bar Scale: One stroke = 0.1 odds ratio distance from equality line (e.g., 3 strokes = .700 odds ratio; 6 strokes = .400 odds ratio)

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TABLE 7.1

OCCUPATIONS BY REGIONS: EMPLOYED WITH LESS THAN GRADE 9

CANADIAN OCCUPATIONS†	CANADIAN REGIONS				
	ATLANTIC	QUEBEC	ONTARIO	PRAIRIES	B.C.
MANAGER	Δ	Δ	*	*	*
TSRA	*	*	0 (20-5990)	Δ	*
TEACHING	Δ	Δ	*	Δ	Δ
MEDICINE	*	+ (55-8730)	+ (180-8560)	*	Δ
CLERICAL	0 (20-6255)	0 (35-39530)	0 (140-42400)	Δ	Δ
SALES	*	*	- (40-42925)	Δ	Δ
SERVICES	+ (210-29205)	+ (240-91865)	+ (670-110305)	+ (85-47635)	+ (40-25530)
FARMING	0 (40-7420)	*	*	*	Δ
PRIMARY	*	Δ	*	Δ	*
PROCESS	- (30-17540)	*	0 (135-47475)	*	*
MACHINE	- (35-15790	- (55-121785)	0 (430-134585)	+ (45-29055)	Δ
CONSTRUCTION	+ (135-26430)	*	- (70-81960)	0 (20-32665)	*
TRANSPORTATION	0 (55-15815)	*	- (90-44350)	*	Δ
OTHER	0 (60-13070)	- (25-51075)	- (160-63185)	Δ	Δ
NOT DETERMINED	+ (120-17315)	+ (100-74895)	+ (340-62995)	+ (45-28165)	*

H_o: $\phi = 1$
$p = 0.01$

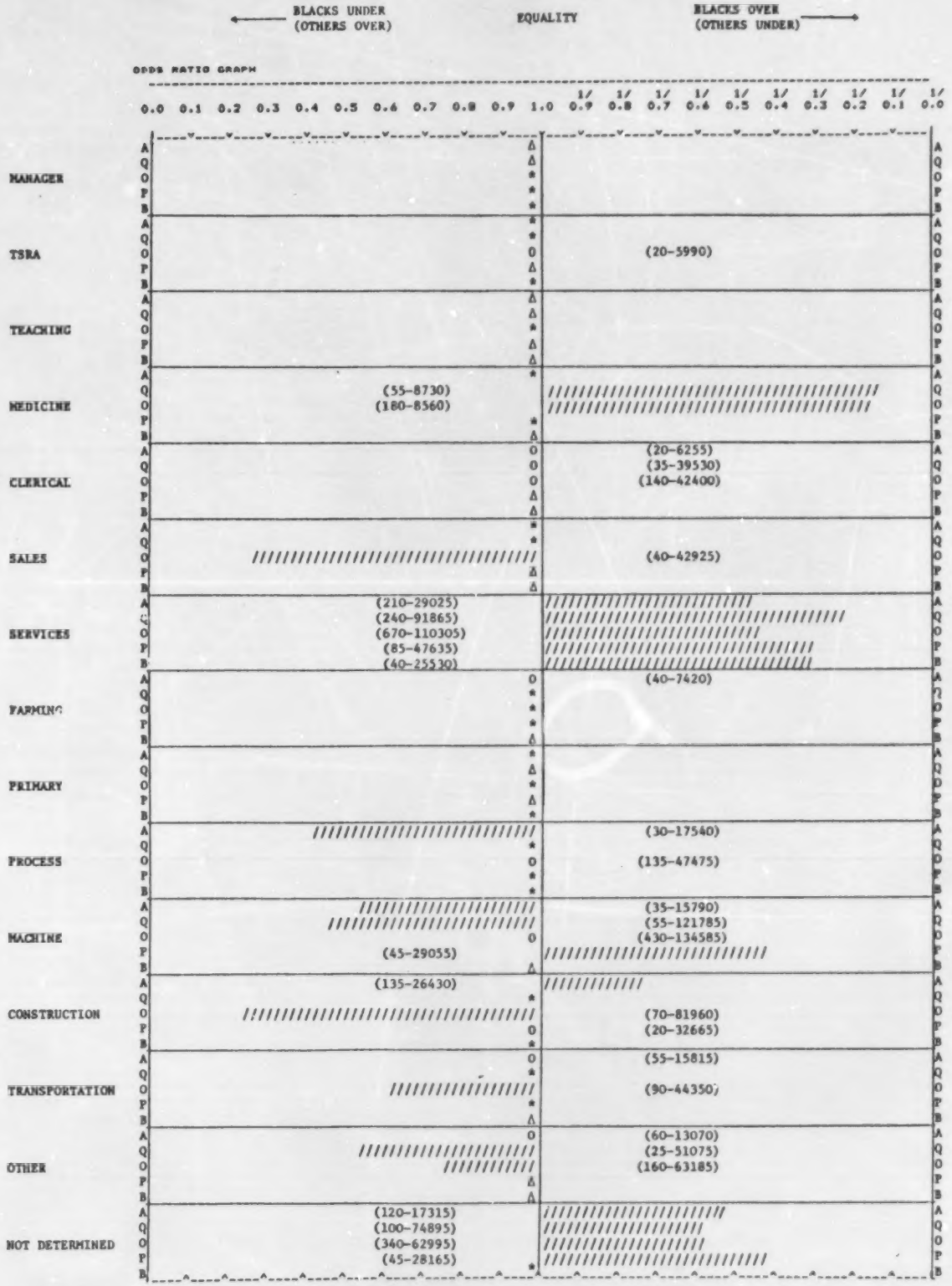
N = (Blacks .. Others)

Symbol Legend

Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
0 = The null is sustained
- = The null is rejected: Blacks "under" represented
+ = The null is rejected: Blacks "over" represented

†For specification of the major occupational groups see Appendix A pages 100-103.

FIG. 7.1 --- OCCUPATIONS BY REGIONS: EMPLOYED WITH LESS THAN GRADE 9



H_o: $\phi = 1$
$p = 0.01$

Symbol Legend:
Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
O = The null is sustained

N = (Blacks .. Others)

Region Legend:
A = Atlantic
Q = Quebec
O = Ontario
P = Prairies
B = British Columbia

Table 7.1.1 ... RANK LOCATIONS OF OCCUPATIONS ACCORDING TO AVERAGE ANNUAL INCOME; WITH THE CORRESPONDING PER CENT WHICH EACH OCCUPATION REPRESENTS OF THE STATED LABOUR FORCE POPULATION: EMPLOYED WITH LESS THAN GRADE 9.

Occupation Ranks	CANADIAN REGIONS									
	Atlantic		Quebec		Ontario		Prairies		B.C.	
	Occupations	%	Occupations	%	Occupations	%	Occupations	%	Occupations	%
1	Manager	.6	Manager	1	Manager	1	Manager	.9	Manager	.8
2	Machine	9	Construct.	9	Primary	2	Process	3	Transport	7
3	Transport	9	Teaching	.3	TSRA	.8	Transport	5	Primary	6
4	Other	7	Transport	7	Construct.	11	Primary	2	Other	8
5	TSRA	.8	TSRA	1	Transport	6	Machine	9	TSRA	.8
6	Construct.	14	Other	8	Process	7	Other	6	Machine	12
7	Clerical	3	Process	7	Machine	19	TSRA	.7	Construct.	12
8	Process	9	Medicine	1	Other	9	Sales	5	Process	9
9	Sales	6	Clerical	6	Clerical	6	Construct.	10	Sales	6
10	Service	16	Sales	8	Sales	6	Clerical	4	Clerical	4
11	Primary	12	Machine	18	Medicine	1	Service	15	Medicine	1
12	Medicine	.9	Primary	3	Service	15	Medicine	1	Service	17
13	Teaching	.1	Service	14	Not Deter.	9	Not Deter.	9	Teaching	.2
14	Not Deter.	9	Not Deter.	11	Teaching	.1	Teaching	.1	Not Deter.	11
15	Farming	4	Farming	7	Farming	7	Farming	29	Farming	5

Abbreviations

TSRA = Occupations in Natural Sciences, Engineering and Mathematics; occupations in Social Sciences and related fields; occupations in religion; Artistic, literary, performing and related occupations

Construct. = Construction

Not Deter. = Not Determined

Machine = Machining

FIG. 7.1.1 —— RANK LOCATIONS OF OCCUPATIONS BY REGIONS: EMPLOYED WITH LESS THAN GRADE 9

OCCUPATIONAL RANKS	ATLANTIC U	ATLANTIC E	ATLANTIC Θ	QUEBEC U	QUEBEC E	QUEBEC Θ	ONTARIO U	ONTARIO E	ONTARIO Θ	PRAIRIES U	PRAIRIES E	PRAIRIES Θ	BRITISH COLUMBIA U	BRITISH COLUMBIA E	BRITISH COLUMBIA Θ
1		Δ			Δ			*			*			*	
2	/////		35 / 15790		*			*			*			Δ	
3		0	55 / 15815		Δ			0	20 / 5990		*			*	
4		0	60 / 13070		*		////////		70 / 81960		Δ			Δ	
5		*			*		////		90 / 44350	45 / 29055		//////		*	
6	135 / 26430		///		/////	25 / 51075		0	135 / 47475		Δ			Δ	
7		0	20 / 6255		*			0	430 / 134585		Δ			*	
8		//////	30 / 17540	55 / 8730		/////////		//	160 / 63185		Δ			*	
9		*			0	35 / 39530		0	140 / 42400		0	20 / 32665		Δ	
10	210 / 29025		/////		*			///////	40 / 42925		Δ			Δ	
11		*			/////	55 / 121785	180 / 8560		/////////	85 / 47635		///////		Δ	
12		*			Δ		670 / 110305	//////			*		40 / 25530		///////
13		Δ		240 / 91865		///////	340 / 62995	////		45 / 28165		//////		Δ	
14	120 / 17315		/////	100 / 74895	////			*			Δ			*	
15		0	40 / 7420		*			*			*			Δ	

H_o $\phi = 1$

Symbol Legend
Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
0 = The null is sustained

Legend
U = Blacks "under" represented
E = Equality
Θ = Blacks "over" represented
N = Blacks / Others

Bar Scale: One stroke = 0.1 odds ratio distance from equality line (e.g., 3 strokes = .700 odds ratio; 6 strokes = .400 odds ratio)

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TABLE 7.2

OCCUPATIONS BY REGIONS: EMPLOYED 9-13 YRS. OF SCHOOLING

CANADIAN OCCUPATIONS	CANADIAN REGIONS				
	ATLANTIC	QUEBEC	ONTARIO	PRAIRIES	B.C.
MANAGER	Δ	- (25-44830)	- (195-85270)	- (20-29310)	*
TSRA	0 (25-9470)	0 (85-38400)	- (345-77115)	0 (35-24380)	*
TEACHING	+ (25-7240)	- (50-36850)	- (135-42520)	*	*
MEDICINE	0 (45-17250)	+ (365-41600)	+ (2025-72755)	+ (210-36115)	+ (80-20050)
CLERICAL	- (100-62665)	- (530-238405)	+ (3630-444135)	- (180-155720)	- (80-105930
SALES	- (25-40115)	- (50-104880)	- (485-214085)	- (40-93305)	*
SERVICES	+ (190-47810)	+ (395-98120)	0 (1275-184385)	+ (235-93060)	0 (80-68965)
FARMING	Δ	*	- (45-64940)	- (30-114600)	*
PRIMARY	Δ	Δ	- (25-12775)	*	*
PROCESS	0 (20-13305)	- (55-36550)	- (245-59165)	*	*
MACHINE	0 (50-23595)	+ (355-99780)	+ (2075-223870)	+ (190-56200)	+ (80-45830)
CONSTRUCTION	0 (35-23210)	- (40-41760)	- (440-98150)	0 (80-50870)	0 (35-39340)
TRANSPORTATION	0 (20-14675)	- (50-28265)	- (220-62270)	0 (35-31000)	0 (30-24355)
OTHER	0 (25-14435)	0 (115-45780)	0 (695-108095)	0 (50-39035)	0 (35-29260)
NOT DETERMINED	+ (110-26255)	+ (385-97045)	+ (1080-141490)	+ (145-62910)	0 (35-45320)

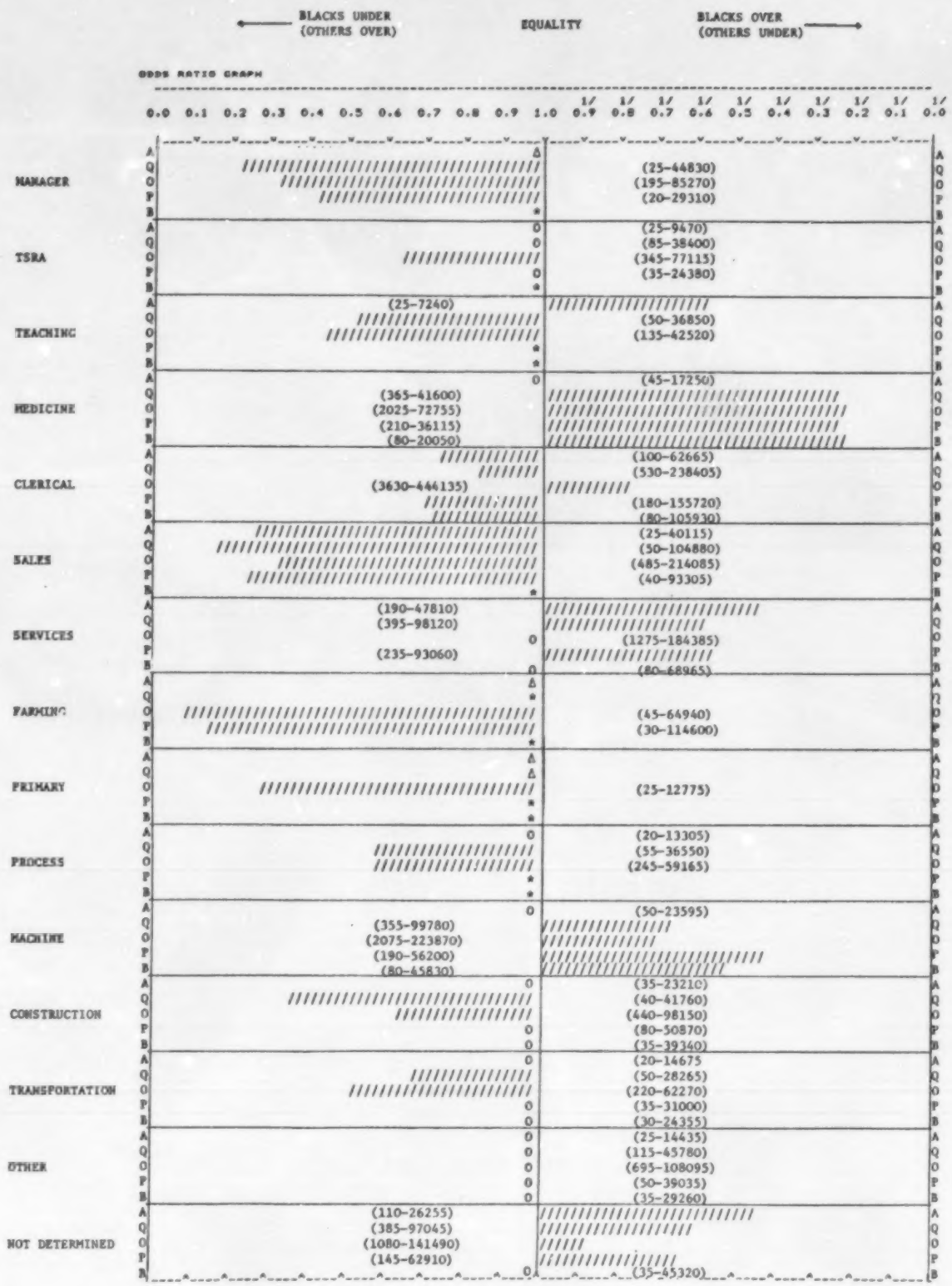
H_o: $\phi = 1$
$p = 0.01$

N = (Blacks .. Others)

Symbol Legend

Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
0 = The null is sustained
- = The null is rejected: Blacks "under" represented
+ = The null is rejected: Blacks "over" represented

FIG. 7.2 --- OCCUPATIONS BY REGIONS: EMPLOYED 9-13 YRS. OF SCHOOLING



H_0: $\phi = 1$
$p = 0.01$

Symbol Legend:
Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
O = The null is sustained

N = (Blacks .. Others)

Region Legend:
A = Atlantic
Q = Quebec
O = Ontario
P = Prairies
B = British Columbia

Table 7.2.1 ... RANK LOCATIONS OF OCCUPATIONS ACCORDING TO AVERAGE ANNUAL INCOME; WITH THE CORRESPONDING PER CENT WHICH EACH OCCUPATION REPRESENTS OF THE STATED LABOUR FORCE POPULATION: EMPLOYED 9-13 YRS. OF SCHOOLING.

Occupation Ranks	CANADIAN REGIONS									
	Atlantic		Quebec		Ontario		Prairies		B.C.	
	Occupations	%	Occupations	%	Occupations	%	Occupations	%	Occupations	%
1	Manager	4	Manager	5	Manager	4	Manager	4	Manager	3
2	TSRA	3	TSRA	4	TSRA	4	Primary	1	Transport	5
3	Transport	4	Transport	3	Construct.	5	Construct.	6	Construct.	7
4	Machine	7	Teaching	4	Sales	11	Teaching	1	Machine	9
5	Construct.	7	Sales	11	Transport	3	Machine	7	TSRA	3
6	Other	4	Construct.	4	Machine	12	Transport	4	Process	4
7	Teaching	2	Machine	10	Teaching	2	TSRA	3	Other	5
8	Sales	12	Process	4	Process	3	Process	2	Primary	3
9	Service	15	Other	5	Other	6	Sales	11	Sales	12
10	Process	4	Medicine	4	Primary	.7	Other	5	Teaching	.9
11	Clerical	19	Primary	.8	Clerical	24	Clerical	19	Medicine	4
12	Primary	3	Clerical	24	Not Deter.	7	Medicine	4	Not Deter.	8
13	Medicine	5	Service	10	Medicine	4	Service	11	Service	13
14	Not Deter.	8	Not Deter.	10	Service	10	Not Deter.	8	Clerical	20
15	Farming	2	Farming	2	Farming	3	Farming	14	Farming	3

FIG. 7.2.1 --- RANK LOCATIONS OF OCCUPATIONS BY REGIONS: EMPLOYED 9-13 YRS OF SCHOOLING

OCCUPATIONAL RANKS	ATLANTIC U	ATLANTIC E	ATLANTIC Θ	QUEBEC U	QUEBEC E	QUEBEC Θ	ONTARIO U	ONTARIO E	ONTARIO Θ	PRAIRIES U	PRAIRIES E	PRAIRIES Θ	BRITISH COLUMBIA U	BRITISH COLUMBIA E	BRITISH COLUMBIA Θ
1		Δ		////////		25/44830	///////		195/85270	//////		20/29310		*	
2		0	25/9470		0	85/38400	////		345/77115		*			0	30/24355
3		0	20/14675	///		50/28265	////		440/98150		0	80/50870		0	35/39340
4		0	50/23595	/////		50/36850	///////		485/214085		*		80/45830		/////
5		0	35/23210	////////		50/104880	/////		220/62270	190/56200		//////		*	
6		0	25/14435	//////		40/41760	2075/223870	///			0	35/31000		*	
7	25/7240		////	355/99780	///		/////		135/42520		0	35/24380		0	35/29260
8	///////		25/40115	////		55/36550	////		245/59165		*			*	
9	190/47810		//////		0	115/45780		0	695/108095	///////		40/93305		*	
10		0	20/13305	365/41600		///////	///////		25/12775		0	50/39035		*	
11		///	100/62665		Δ		3630/444135	//			///	180/155720	80/20050		////////
12		Δ			//	530/238405	1080/141490	/		210/36115		////////		0	35/45320
13		0	45/17250	395/98120		////	2025/72755		////////	235/93060		////		0	80/68965
14	110/26255		//////	385/97045		////		0	1275/184385	145/62910		////		///	80/105930
15		Δ			*		/////////		45/64940	/////////		30/114600		*	

H_o $\phi = 1$

Symbol Legend
Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
0 = The null is sustained

Legend
U = Blacks "under" represented
E = Equality
Θ = Blacks "over" represented
N = Blacks / Others

Bar Scale: One stroke = 0.1 odds ratio distance from equality line (e.g., 3 strokes = .700 odds ratio; 6 strokes = .400 odds ratio)

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TABLE 7.3

OCCUPATIONS BY REGIONS: EMPLOYED WITH 1-4 YRS. OF UNIVERSITY

CANADIAN OCCUPATIONS	CANADIAN REGIONS				
	ATLANTIC	QUEBEC	ONTARIO	PRAIRIES	B.C.
MANAGER	*	- (95-29400)	- (120-42040)	*	*
TSRA	*	0 (130-27615)	- (260-51590)	0 (55-19855)	*
TEACHING	0 (35-13570)	0 (205-36740)	0 (345-56770)	0 (80-33920)	*
MEDICINE	+ (20-3480)	+ (160-15695)	+ (295-18810)	+ (45-9640)	+ (20-5735)
CLERICAL	*	+ (240-35610)	+ (560-52850)	0 (40-21685)	0 (30-16825)
SALES	*	- (45-21010)	- (110-34340)	0 (25-14265)	*
SERVICES	*	0 (45-9305)	- (85-18250)	0 (30-10015)	+ (25-8960)
FARMING	Δ	Δ	0 (40-7075)	Δ	Δ
PRIMARY	Δ	Δ	*	Δ	Δ
PROCESS	Δ	*	0 (30-5860)	*	*
MACHINE	*	+ (70-6335)	+ (150-13355)	+ (25-3955)	*
CONSTRUCTION	Δ	*	- (25-8970)	*	*
TRANSPORTATION	Δ	Δ	0 (20-5000)	*	Δ
OTHER	*	*	- (45-12340)	*	*
NOT DETERMINED	*	0 (60-9640)	0 (90-12165)	*	Δ

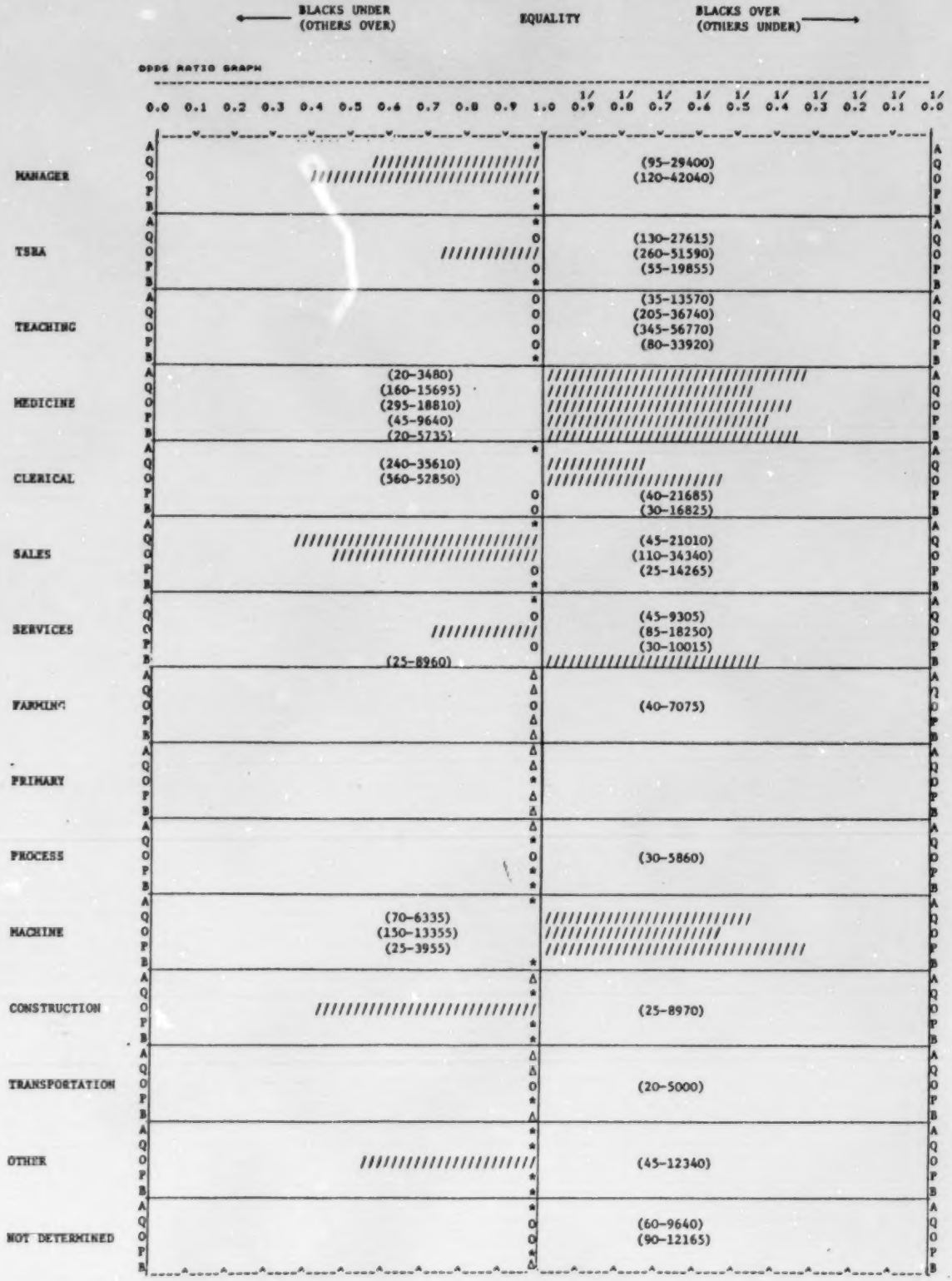
H_o: $\phi = 1$
$p = 0.01$

N = (Blacks .. Others)

Symbol Legend

Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
0 = The null is sustained
- = The null is rejected: Blacks "under" represented
+ = The null is rejected: Blacks "over" represented

FIG. 7.3 —— OCCUPATIONS BY REGIONS: EMPLOYED WITH 1-4 YRS. OF UNIVERSITY



H_o: $\phi = 1$
$p = 0.01$

Symbol Legend:
Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
O = The null is sustained

N = (Blacks .. Others)

Region Legend:
A = Atlantic
Q = Quebec
O = Ontario
P = Prairies
B = British Columbia

Table 7.3.1 ... RANK LOCATIONS OF OCCUPATIONS ACCORDING TO AVERAGE ANNUAL INCOME; WITH THE CORRESPONDING PER CENT WHICH EACH OCCUPATION REPRESENTS OF THE STATED LABOUR FORCE POPULATION: EMPLOYED WITH 1-4 YRS. OF UNIVERSITY.

Occupation Ranks	CANADIAN REGIONS									
	Atlantic		Quebec		Ontario		Prairies		B.C.	
	Occupations	%	Occupations	%	Occupations	%	Occupations	%	Occupations	%
1	Manager	9	Manager	14	Manager	12	Manager	9	Manager	8
2	Primary	1	TSRA	13	TSRA	15	Primary	.8	Teaching	14
3	TSRA	12	Sales	10	Teaching	17	Sales	9	Other	4
4	Service	8	Construct.	2	Sales	10	TSRA	12	TSRA	11
5	Sales	10	Teaching	18	Process	2	Teaching	21	Transport	2
6	Medicine	6	Transport	1	Medicine	6	Process	1	Process	3
7	Construct.	3	Machine	3	Machine	4	Medicine	6	Sales	12
8	Teaching	23	Medicine	8	Transport	1	Machine	2	Not Deter.	4
9	Transport	2	Process	1	Construct.	3	Construct.	3	Construct.	4
10	Machine	2	Primary	.3	Service	5	Service	6	Medicine	6
11	Not Deter.	4	Not Deter.	5	Not Deter.	4	Transport	2	Service	9
12	Clerical	14	Clerical	17	Clerical	16	Clerical	13	Machine	4
13	Process	2	Other	2	Other	4	Other	4	Primary	2
14	Other	3	Service	5	Primary	.7	Not Deter.	4	Clerical	16
15	Farming	2	Farming	.8	Farming	2	Farming	7	Farming	2

FIG. 7.3.1 --- RANK LOCATIONS OF OCCUPATIONS BY REGIONS: EMPLOYED WITH 1-4 YRS. OF UNIVERSITY

OCCUPATIONAL RANKS	ATLANTIC U	ATLANTIC E	ATLANTIC Θ	QUEBEC U	QUEBEC E	QUEBEC Θ	ONTARIO U	ONTARIO E	ONTARIO Θ	PRAIRIES U	PRAIRIES E	PRAIRIES Θ	BRITISH COLUMBIA U	BRITISH COLUMBIA E	BRITISH COLUMBIA Θ
1		*			////	95/29400	//////	120/42040			*			*	
2		Δ			0	130/27615	//	260/51590			Δ			*	
3		*			//////	45/21010	0	345/56770			0	25/14265		*	
4		*			*		/////	110/34340			0	55/19855		*	
5		*			0	205/36740	0	30/5860			0	80/33920		Δ	
6	20/3480		///////		Δ		295/18810	//////			*			*	
7		Δ		70/6335	/////		150/13355	////		45/9640		//////		*	
8		0	35/13570	160/15695	/////			0	20/5000	25/3955		///////		Δ	
9		Δ			*		//////		25/8970		*			*	
10		*			Δ		///		85/18250		0	30/10015	20/5735		//////
11		*			0	60/9640		0	90/12165		*		25/8960		/////
12		*		240/35610	///		560/52850	/////			0	40/21685		*	
13		Δ			*		////		45/12340		*			Δ	
14		*			0	45/9305		*			*			0	30/16825
15		Δ			Δ			0	40/7075		Δ			Δ	

H_o $\phi = 1$

Symbol Legend
Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
0 = The null is sustained

Legend
U = Blacks "under" represented
E = Equality
Θ = Blacks "over" represented
N = Blacks / Others

Bar Scale: One stroke = 0.1 odds ratio distance from equality line (e.g., 3 strokes = .700 odds ratio; 6 strokes = .400 odds ratio)

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TABLE 7.4

OCCUPATIONS BY REGIONS: EMPLOYED WITH 5+ YRS. OF UNIVERSITY

CANADIAN OCCUPATIONS	CANADIAN REGIONS				
	ATLANTIC	QUEBEC	ONTARIO	PRAIRIES	B.C.
MANAGER	*	- (30-16025)	- (60-16375)	*	0 (20-4825)
TSRA	*	- (75-22490)	- (255-33070)	- (30-13040)	0 (30-9860)
TEACHING	0 (30-7380)	+ (195-18925)	0 (210-23555)	+ (120-13305)	0 (40-11275)
MEDICINE	+ (25-2395)	+ (105-10880)	+ (275-15585)	0 (40-6810)	0 (25-5040)
CLERICAL	Δ	0 (35-4800)	0 (60-4915)	*	*
SALES	Δ	*	*	Δ	Δ
SERVICES	Δ	*	*	*	*
FARMING	Δ	Δ	Δ	Δ	Δ
PRIMARY	Δ	Δ	Δ	*	Δ
PROCESS	Δ	Δ	Δ	Δ	*
MACHINE	Δ	Δ	+ (35-1690)	*	Δ
CONSTRUCTION	Δ	Δ	*	Δ	*
TRANSPORTATION	Δ	Δ	*	Δ	Δ
OTHER	*	+ (20-1195)	+ (35-2410)	Δ	*
NOT DETERMINED	Δ	Δ	0 (40-3545)	+ (25-1435)	*

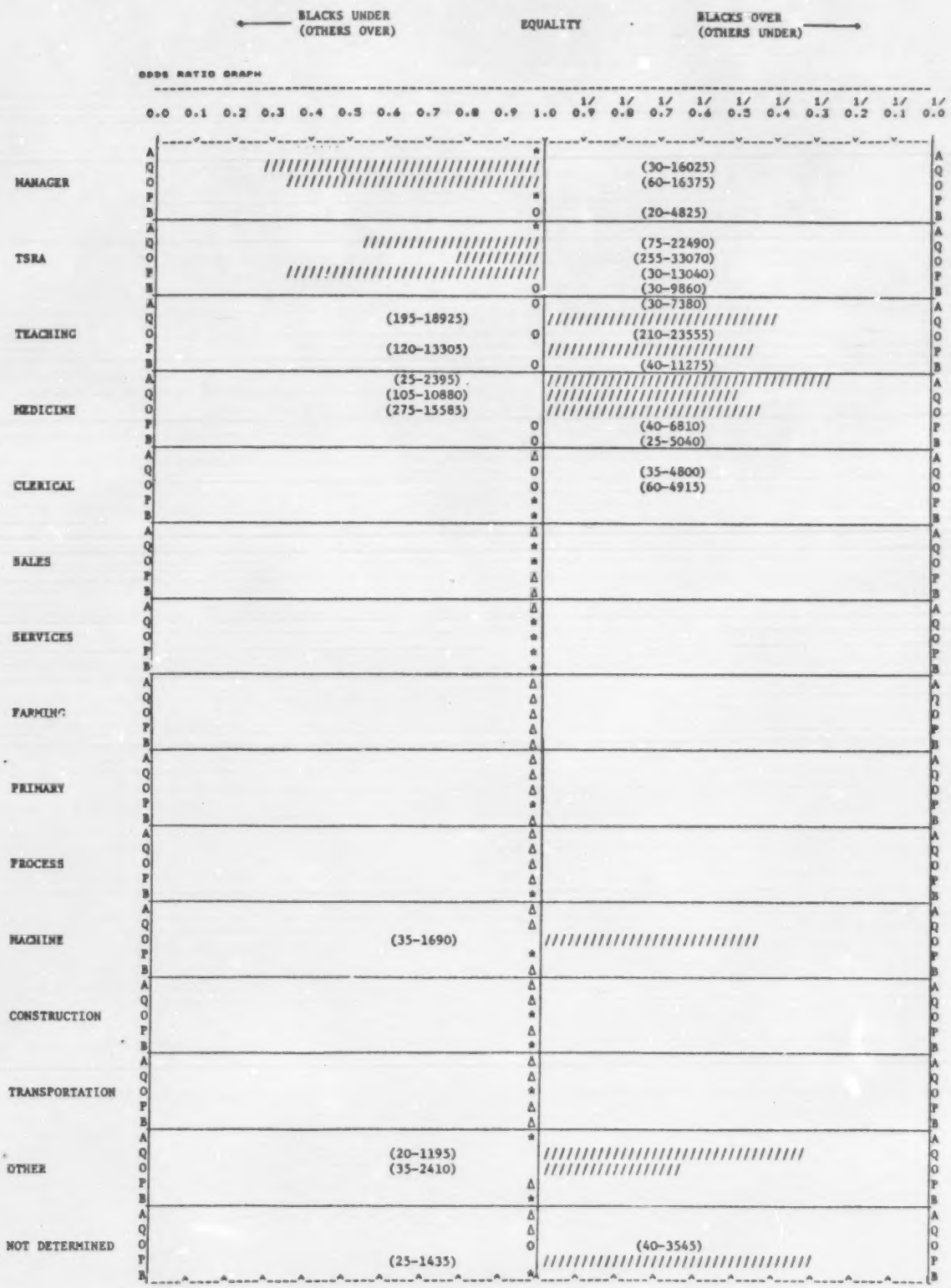
H_o: $\phi = 1$
$p = 0.01$

N = (Blacks .. Others)

Symbol Legend

Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
0 = The null is sustained
- = The null is rejected: Blacks "under" represented
+ = The null is rejected: Blacks "over" represented

FIG. 7.4 --- OCCUPATIONS BY REGIONS: EMPLOYED WITH 5+ YRS. OF UNIVERSITY



H_o: $\phi = 1$
$p = 0.01$

Symbol Legend:
Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
O = The null is sustained

N = (Blacks .. Others)

Region Legend:
A = Atlantic
Q = Quebec
O = Ontario
P = Prairies
B = British Columbia

Table 7.4.1 ... RANK LOCATIONS OF OCCUPATIONS ACCORDING TO AVERAGE ANNUAL INCOME; WITH THE CORRESPONDING PER CENT WHICH EACH OCCUPATION REPRESENTS OF THE STATED LABOUR FORCE POPULATION: EMPLOYED WITH 5+ YRS. OF UNIVERSITY.

Occupation Ranks	CANADIAN REGIONS									
	Atlantic		Quebec		Ontario		Prairies		B.C.	
	Occupations	%	Occupations	%	Occupations	%	Occupations	%	Occupations	%
1	Medicine	11	Manager	18	Manager	15	Manager	14	Manager	12
2	Service	3	Medicine	13	Teaching	21	Teaching	28	Medicine	13
3	Process	.7	Teaching	22	TSRA	30	Sales	3	Teaching	29
4	Manager	13	TSRA	26	Primary	.1	Not Deter.	3	Service	2
5	Teaching	33	Sales	4	Service	2	TSRA	27	Other	1
6	TSRA	27	Process	.7	Medicine	14	Service	2	TSRA	25
7	Machine	.6	Primary	.2	Sales	3	Other	2	Transport	.8
8	Sales	3	Clerical	6	Process	.7	Medicine	14	Construct.	1
9	Clerical	3	Machine	2	Not Deter.	3	Construct.	1	Sales	4
10	Other	1	Transport	.6	Transport	.4	Machine	.8	Primary	.6
11	Not Deter.	3	Construct.	.9	Machine	2	Clerical	3	Process	1
12	Transport	.5	Service	2	Clerical	4	Transport	.5	Not Deter.	3
13	Primary	.5	Not Deter.	4	Construct.	.8	Farming	1	Farming	.8
14	Construct.	1	Other	1	Other	2	Primary	.3	Clerical	4
15	Farming	.4	Farming	.4	Farming	.5	Process	.4	Machine	1

FIG. 7.4.1 --- RANK LOCATIONS OF OCCUPATIONS BY REGIONS: EMPLOYED WITH 5+ YRS. OF UNIVERSITY

OCCUPATIONAL RANKS	ATLANTIC U	ATLANTIC E	ATLANTIC Θ	QUEBEC U	QUEBEC E	QUEBEC Θ	ONTARIO U	ONTARIO E	ONTARIO Θ	PRAIRIES U	PRAIRIES E	PRAIRIES Θ	BRITISH COLUMBIA U	BRITISH COLUMBIA E	BRITISH COLUMBIA Θ
1	25/2395		///////	///////		30/16025	//////		60/16375		*			0	20/4825
2		Δ		105/10880	/////			0	210/23555	120/13305		/////		0	25/5040
3		Δ		195/18925	//////			//	255/33070		Δ			0	40/11275
4		*			/////	75/22490		Δ		25/1435		///////		*	
5		0	30/7380		*			*			///////	30/13040		*	
6		*			Δ		275/15585	//////			*			0	30/9860
7		Δ			Δ			*			Δ			Δ	
8		Δ			0	35/4800		Δ			0	40/6810		*	
9		Δ			Δ			0	40/3545		Δ			Δ	
10		*			Δ			*			*			Δ	
11		Δ			Δ		35/1690	//////			*			*	
12		Δ			*			0	60/4915		Δ			*	
13		Δ			Δ			*			Δ			Δ	
14		Δ		20/1195	///////		35/2410	////			*			*	
15		Δ			Δ			Δ			Δ			Δ	

H_o $\phi = 1$

Symbol Legend
Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
0 = The null is sustained

Legend
U = Blacks "under" represented
E = Equality
Θ = Blacks "over" represented
N = Blacks / Others

Bar Scale: One stroke = 0.1 odds ratio distance from equality line (e.g., 3 strokes = .700 odds ratio; 6 strokes = .400 odds ratio)

TABLE 8.1

INDUSTRIES BY REGIONS: EMPLOYED 15-24 YRS. OF AGE

CANADIAN INDUSTRIES	CANADIAN REGIONS				
	ATLANTIC	QUEBEC	ONTARIO	PRAIRIES	B.C.
AGRICULTURE	Δ	Δ	- (30-30625)	*	*
FORESTRY	Δ	Δ	Δ	Δ	Δ
FISHERIES	Δ	Δ	Δ	Δ	Δ
MINING	Δ	Δ	- (20-8160)	*	Δ
MANUFACTURING	0 (40-22245)	0 (140-109280)	0 (710-148800)	0 (55-32770)	*
CONSTRUCTION	0 (20-9265)	*	- (45-36030)	*	Δ
TRANSPORTATION	*	0 (45-25670)	0 (215-38010)	0 (20-23965)	*
TRADE	0 (65-27845)	0 (90-73535)	- (430-133310)	0 (65-58220)	*
FINANCE	*	0 (55-28670)	+ (350-39515)	*	*
SERVICE	0 (80-39500)	+ (225-126825)	+ (1010-181365)	+ (175-86070)	+ (55-49285)
PUBLIC	0 (35-15500)	*	0 (235-48395)	*	*
NOT DETERMINED	+ (85-15760)	+ (160-50630)	+ (445-61265)	+ (60-29380)	*

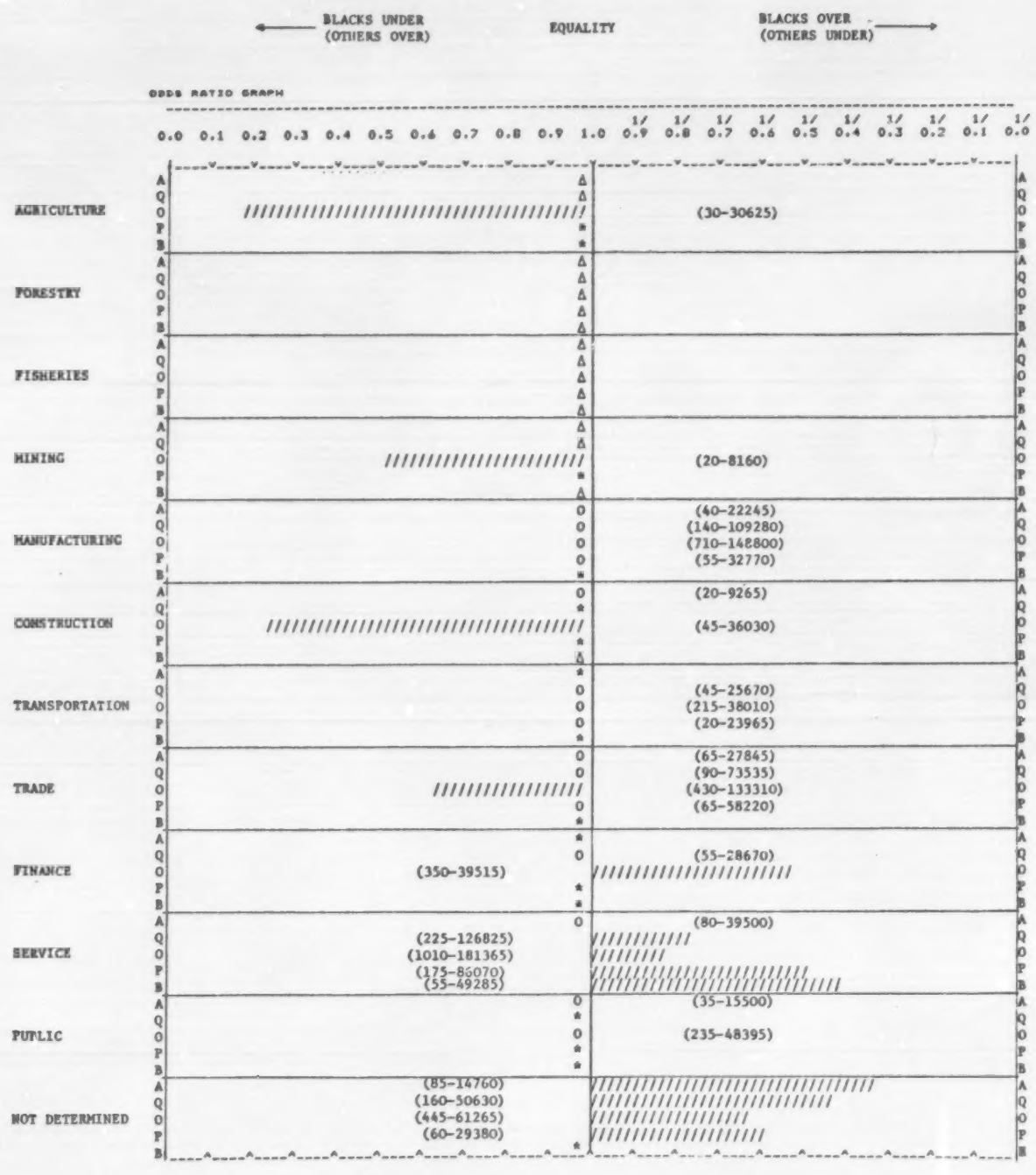
H_o: $\phi = 1$
$p = 0.01$

N = (Blacks .. Others)

Symbol Legend

Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
0 = The null is sustained
- = The null is rejected: Blacks "under" represented
+ = The null is rejected: Blacks "over" represented

FIG. 8.1 --- INDUSTRIES BY REGIONS: EMPLOYED 15-24 YRS. OF AGE



H_o: $\phi = 1$

$p = 0.01$

Symbol Legend:
Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
O = The null is sustained

N = (Blacks .. Others)

Region Legend:
A = Atlantic
Q = Quebec
O = Ontario
P = Prairies
B = British Columbia

Table 8.1.1 ... RANK LOCATIONS OF INDUSTRIES BY REGIONS ACCORDING TO AVERAGE ANNUAL INCOME; WITH THE CORRESPONDING PER CENT WHICH EACH INDUSTRY REPRESENTS OF THE STATED LABOUR FORCE POPULATION: EMPLOYED 15-24 YRS. OF AGE.

Industry Ranks	CANADIAN REGIONS									
	Atlantic		Quebec		Ontario		Prairies		B.C.	
	Industries	%	Industries	%	Industries	%	Industries	%	Industries	%
1	Mining	1	Mining	.9	Mining	1	Forestry	.3	Mining	1
2	Public	10	Transport	5	Transport	5	Mining	3	Forestry	3
3	Transport	7	Finance	6	Construct.	5	Construct.	5	Transport	8
4	Finance	4	Public	6	Manuf.	20	Transport	7	Manuf.	16
5	Construct.	6	Manuf.	22	Public	7	Public	8	Public	6
6	Manuf.	14	Construct.	4	Finance	5	Finance	5	Construct.	5
7	Service	25	Service	26	Trade	18	Manuf.	9	Finance	5
8	Forestry	2	Forestry	.8	Service	25	Trade	17	Trade	19
9	Trade	18	Trade	15	Not Deter.	8	Service	25	Service	25
10	Not Deter.	9	Not Deter.	10	Forestry	.2	Not Deter.	8	Not Deter.	9
11	Fisheries	2	Fisheries	.1	Fisheries	Neg.	Agric.	13	Fisheries	.3
12	Agric.	2	Agric.	4	Agric.	4	Fisheries	.1	Agric.	3

FIG. 8.1.1 —— RANK LOCATIONS OF INDUSTRIES BY REGIONS: EMPLOYED 15-24 YRS. OF AGE

INDUSTRY RANKS	ATLANTIC U	ATLANTIC E	ATLANTIC Θ	QUEBEC U	QUEBEC E	QUEBEC Θ	ONTARIO U	ONTARIO E	ONTARIO Θ	PRAIRIES U	PRAIRIES E	PRAIRIES Θ	BRITISH COLUMBIA U	BRITISH COLUMBIA E	BRITISH COLUMBIA Θ
1		Δ			Δ		/////	20/8160			Δ			Δ	
2		0	35/15500		0	45/25670		0	215/38010		*			Δ	
3		*			0	55/28670	////////	45/36030			*			*	
4		*			*			0	710/148800		0	20/23965		*	
5		0	20/9265		0	140/109280		0	235/48395		*			*	
6		0	40/22245		*		350/39515		/////		*			Δ	
7		0	80/39500	225/126825		//		////	430/133310		0	55/32770		*	
8		Δ			Δ		1010/181365		//		0	65/58220		*	
9		0	65/27845		0	90/73535	445/61265		////	175/86070		/////	55/49285		//////
10	85/14760		////////	160/50630		//////		Δ		60/29380		////		*	
11		Δ			Δ			Δ			*			Δ	
12		Δ			Δ		////////		30/30625		Δ			*	

H_o $\phi = 1$

Symbol Legend
Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
0 = The null is sustained

Legend
U = Blacks "under" represented
E = Equality
Θ = Blacks "over" represented
N = Blacks / Others

Bar Scale: One stroke = 0.1 odds ratio distance from equality line (e.g., 3 strokes = .700 odds ratio; 6 strokes = .400 odds ratio)

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TABLE 8.2

INDUSTRIES BY REGIONS: EMPLOYED 25-44 YRS. OF AGE

CANADIAN INDUSTRIES	CANADIAN REGIONS				
	ATLANTIC	QUEBEC	ONTARIO	PRAIRIES	B.C.
AGRICULTURE	0 (20-4125)	*	*	*	Δ
FORESTRY	*	Δ	Δ	Δ	*
FISHERIES	Δ	Δ	Δ	Δ	Δ
MINING	*	Δ	- (50-18170)	0 (40-20735)	*
MANUFACTURING	- (70-35855)	- (640-214035)	- (2750-367810)	+ (245-58525)	0 (115-62650)
CONSTRUCTION	0 (80-20455)	- (35-56635)	- (380-98205)	0 (80-41830)	0 (40-29825)
TRANSPORTATION	- (50-25420)	- (230-80135)	0 (970-98005)	- (95-53545)	0 (65-38300)
TRADE	- (40-34310)	- (200-119685)	- (1075-179860)	- (100-82625)	- (45-55370)
FINANCE	0 (20-7210)	0 (155-36975	+ (750-65940)	- (20-21160)	0 (25-16330)
SERVICE	+ (320-56830)	+ (1705-229160)	+ (4840-321790)	+ (610-133610)	+ (280-88280)
PUBLIC	0 (115-33260)	- (85-61685)	+ (1090-103750)	0 (120-49350)	0 (55-23420)
NOT DETERMINED	+ (85-16040)	0 (280-73560)	+ (855-83070)	+ (110-34130)	0 (35-24035)

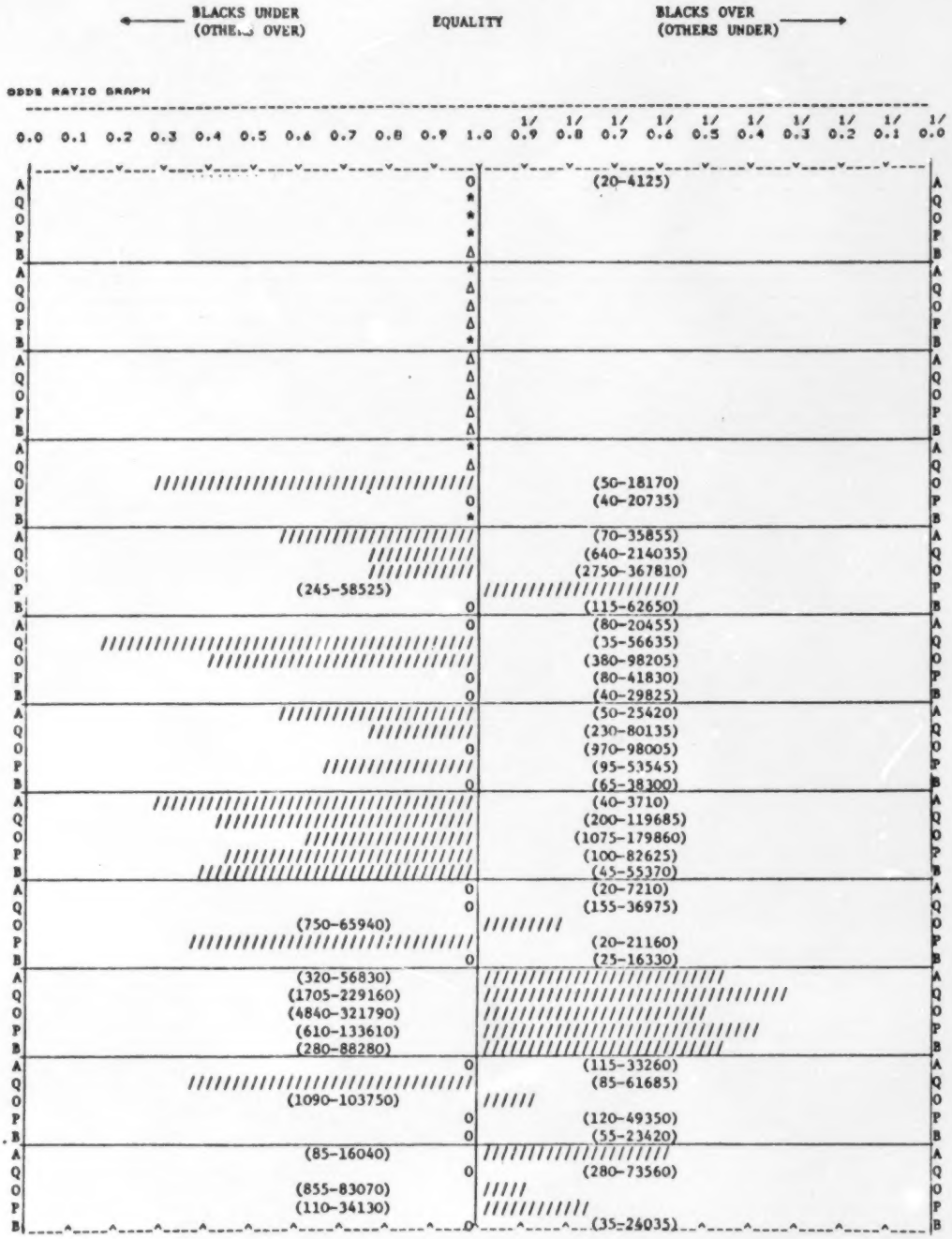
H_o: $\phi = 1$
$p = 0.01$

N = (Blacks .. Others)

Symbol Legend

Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
0 = The null is sustained
- = The null is rejected: Blacks "under" represented
+ = The null is rejected: Blacks "over" represented

FIG. 8.2 --- INDUSTRIES BY REGIONS: EMPLOYED 25-44 YRS. OF AGE



H_o: $\phi = 1$

$p = 0.01$

Symbol Legend:
Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
O = The null is sustained

N = (Blacks .. Others)

Region Legend:
A = Atlantic
Q = Quebec
O = Ontario
P = Prairies
B = British Columbia

Table 8.2.1 ... RANK LOCATIONS OF INDUSTRIES BY REGIONS ACCORDING TO AVERAGE ANNUAL INCOME; WITH THE CORRESPONDING PER CENT WHICH EACH INDUSTRY REPRESENTS OF THE STATED LABOUR FORCE POPULATION: EMPLOYED 25-44 YRS. OF AGE.

dustry Ranks	CANADIAN REGIONS									
	Atlantic		Quebec		Ontario		Prairies		B.C.	
	Industries	%	Industries	%	Industries	%	Industries	%	Industries	%
1	Public	13	Mining	1	Mining	1	Mining	4	Mining	2
2	Transport	10	Public	7	Public	8	Public	9	Transport	10
3	Finance	3	Transport	9	Transport	7	Finance	4	Public	6
4	Mining	3	Finance	4	Construct.	7	Construct.	7	Forestry	3
5	Construct.	8	Construct.	6	Finance	5	Manuf.	10	Manuf.	17
6	Manuf.	14	Manuf.	23	Manuf.	27	Transport	9	Construct.	8
7	Service	22	Service	25	Forestry	.3	Trade	14	Finance	4
8	Trade	15	Trade	13	Service	23	Service	23	Trade	15
9	Forestry	2	Forestry	.9	Trade	13	Not Deter.	6	Service	24
10	Not Deter.	6	Not Deter.	8	Not Deter.	6	Forestry	.3	Fisheries	.4
11	Fisheries	2	Fisheries	.1	Fisheries	Neg.	Fisheries	.1	Not Deter.	7
12	Agric.	2	Agric.	3	Agric.	3	Agric.	13	Agric.	2

FIG. 8.2.1 —— RANK LOCATIONS OF INDUSTRIES BY REGIONS: EMPLOYED 25-44 YRS. OF AGE

INDUSTRY RANKS	ATLANTIC U	ATLANTIC E	ATLANTIC ⊖	QUEBEC U	QUEBEC E	QUEBEC ⊖	ONTARIO U	ONTARIO E	ONTARIO ⊖	PRAIRIES U	PRAIRIES E	PRAIRIES ⊖	BRITISH COLUMBIA U	BRITISH COLUMBIA E	BRITISH COLUMBIA ⊖
1		0	115/33260		Δ		///////	50/18170			0	40/20735		*	
2		////	50/25420		//////	85/61685	1090/103750	/			0	120/49350		0	65/38300
3		0	20/7210		//	230/80135		0	970/98005		//////	20/21160		0	55/23420
4		*			0	155/36975		//////	380/98205		0	80/41830		*	
5		0	80/20455		////////	35/56635	750/65940	//		245/58525		////		0	115/62650
6		////	70/35855		//	640/214035		//	2750/367810		///	95/53545		0	40/29825
7	320/56830		/////	1705/229160		///////		Δ			//////	100/82625		0	25/16330
8		///////	40/3710		//////	200/119685	4840/321790	/////		610/133610		//////		//////	45/55370
9		*			Δ			////	1075/179860	110/34130		//	280/88280		/////
10	85/16040		////		0	280/73560	855/83070	/			Δ			Δ	
11		Δ			Δ			Δ			Δ			0	35/24035
12		0	20/4125		*			*			*			Δ	

H_o $\phi = 1$

Symbol Legend
Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
0 = The null is sustained

Legend
U = Blacks "under" represented
E = Equality
⊖ = Blacks "over" represented
N = Blacks / Others

Bar Scale: One stroke = 0.1 odds ratio distance from equality line (e.g., 3 strokes = .700 odds ratio; 6 strokes = .400 odds ratio)

TABLE 8.3

INDUSTRIES BY REGIONS: EMPLOYED 45-64 YRS. OF AGE

CANADIAN INDUSTRIES	CANADIAN REGIONS				
	ATLANTIC	QUEBEC	ONTARIO	PRAIRIES	B.C.
AGRICULTURE	*	*	*	- (25-92455)	Δ
FORESTRY	Δ	Δ	Δ	Δ	*
FISHERIES	Δ	Δ	Δ	Δ	Δ
MINING	Δ	Δ	*	Δ	*
MANUFACTURING	0 (50-27180)	- (55-131770)	- (430-239995)	*	*
CONSTRUCTION	+ (85-14335)	Δ	- (60-51345)	*	*
TRANSPORTATION	0 (40-22205)	+ (110-54210)	0 (190-72285)	+ (45-38425)	+ (35-26870)
TRADE	- (20-27040)	- (55-74790)	- (155-140525)	0 (25-63235)	*
FINANCE	Δ	*	- (60-38605)	Δ	*
SERVICE	+ (140-40555)	+ (240-121335)	+ (915-213960)	+ (90-97180)	+ (55-66460)
PUBLIC	0 (45-19940)	- (20-38265)	- (150-81750)	*	*
NOT DETERMINED	+ (45-11875)	+ (90-47565)	+ (175-57220)	0 (20-25515)	*

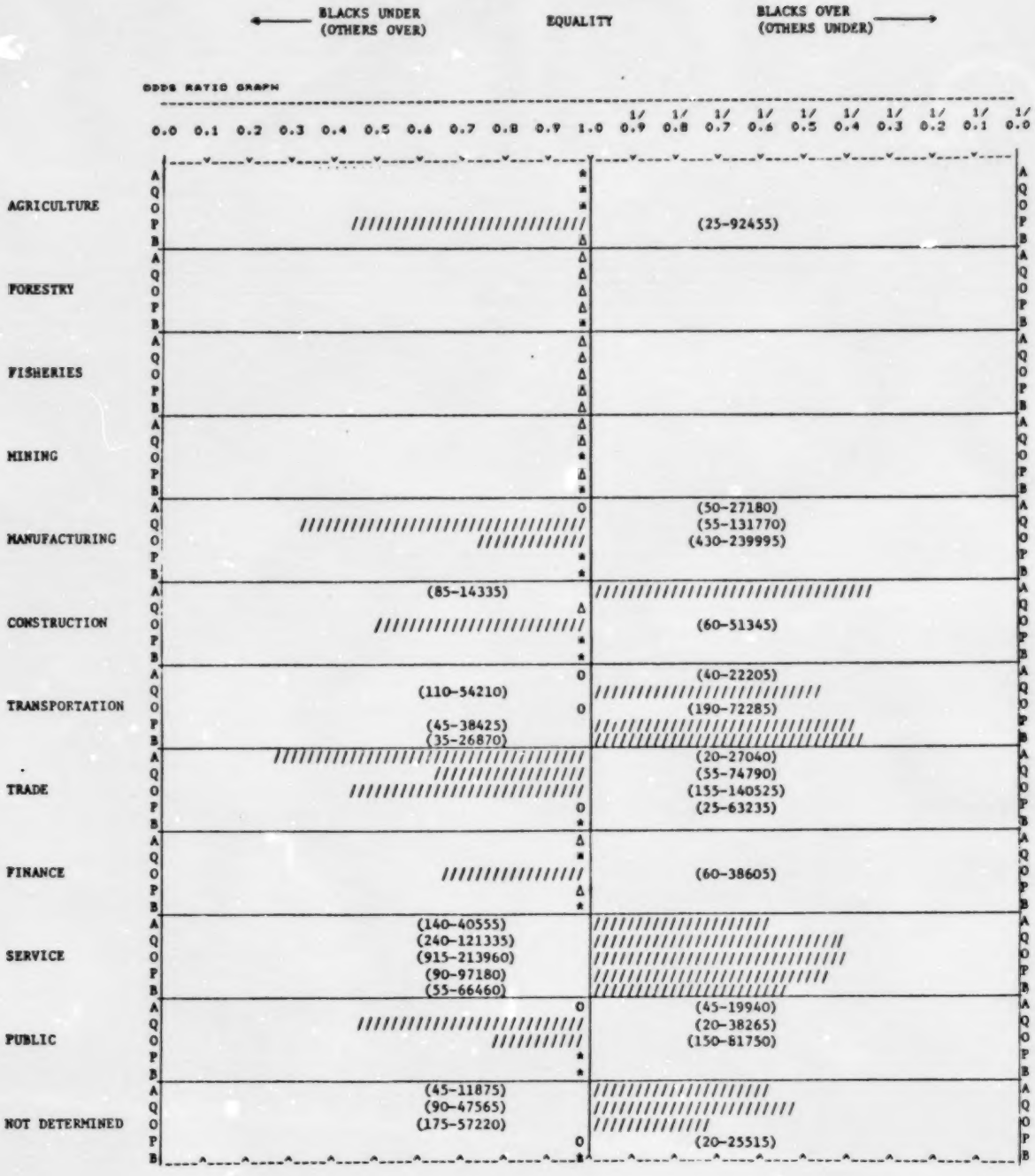
H_o: $\phi = 1$
$p = 0.01$

N = (Blacks .. Others)

Symbol Legend

Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
0 = The null is sustained
- = The null is rejected: Blacks "under" represented
+ = The null is rejected: Blacks "over" represented

FIG. 8.3 --- INDUSTRIES BY REGIONS: EMPLOYED 45-64 YRS. OF AGE



H_o: $\phi = 1$

$p = 0.01$

Symbol Legend:
Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
O = The null is sustained

N = (Blacks .. Others)

Region Legend:
A = Atlantic
Q = Quebec
O = Ontario
P = Prairies
B = British Columbia

Table 8.3.1 ... RANK LOCATIONS OF INDUSTRIES BY REGIONS ACCORDING TO AVERAGE ANNUAL INCOME; WITH THE CORRESPONDING PER CENT WHICH EACH INDUSTRY REPRESENTS OF THE STATED LABOUR FORCE POPULATION: EMPLOYED 45-64 YRS. OF AGE.

ustry nks	CANADIAN REGIONS									
	Atlantic		Quebec		Ontario		Prairies		B.C.	
	Industries	%	Industries	%	Industries	%	Industries	%	Industries	%
1	Public	11	Finance	3	Public	9	Mining	2	Transport	10
2	Finance	2	Public	7	Mining	1	Public	8	Public	7
3	Mining	2	Mining	1	Transport	8	Transport	9	Mining	1
4	Transport	12	Transport	10	Manuf.	25	Manuf.	9	Forestry	2
5	Manuf.	15	Manuf.	24	Finance	4	Finance	3	Manuf.	16
6	Construct.	8	Construct.	5	Forestry	.2	Construct.	5	Finance	4
7	Service	22	Trade	14	Construct.	5	Service	23	Construct.	7
8	Trade	15	Service	22	Trade	15	Trade	15	Trade	16
9	Forestry	2	Forestry	.8	Service	22	Forestry	.2	Service	25
10	Not Deter.	6	Not Deter.	9	Not Deter.	6	Not Deter.	6	Not Deter.	7
11	Fisheries	3	Fisheries	.1	Agric.	5	Fisheries	Neg.	Fisheries	.5
12	Agric.	3	Agric.	5	Fisheries	.1	Agric.	22	Agric.	3

FIG. 8.3.1 --- RANK LOCATIONS OF INDUSTRIES BE REGIONS: EMPLOYED 45-64 YRS. OF AGE

INDUSTRY RANKS	ATLANTIC U	ATLANTIC E	ATLANTIC Θ	QUEBEC U	QUEBEC E	QUEBEC Θ	ONTARIO U	ONTARIO E	ONTARIO Θ	PRAIRIES U	PRAIRIES E	PRAIRIES Θ	BRITISH COLUMBIA U	BRITISH COLUMBIA E	BRITISH COLUMBIA Θ
1		0	45 19940		*			//	150 81750		Δ		35 26870		//////
2		Δ			/////	20 38265		*			*			*	
3		Δ			Δ			0	190 72285	45 38425		//////		*	
4		0	40 22205	110 54210		//////		///	430 239995		*			*	
5		0	50 27180		///////	55 131770		////	60 38605		Δ			*	
6	85 14335		///////		Δ			Δ			*			*	
7	140 40555		////		////	55 74790		/////	60 51345	90 97180		//////		*	
8		///////	20 27040	240 121335		//////		//////	155 140525		0	25 63235		*	
9		Δ			Δ		915 213960		//////		Δ		55 66460		/////
10	45 11875		////	90 47565		/////	175 57220		///		0	20 25515		*	
11		Δ			Δ			*			Δ			Δ	
12		*			*			Δ				25 92455		Δ	

H_o $\phi = 1$

Symbol Legend
Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
0 = The null is sustained

Legend
U = Blacks "under" represented
E = Equality
Θ = Blacks "over" represented
N = Blacks / Others

Bar Scale: One stroke = 0.1 odds ratio distance from equality line (e.g., 3 strokes = .700 odds ratio; 6 strokes = .400 odds ratio)

TABLE 9.1

OCCUPATIONS BY REGIONS: EMPLOYED 15-24 YRS. OF AGE

CANADIAN OCCUPATIONS	CANADIAN REGIONS				
	ATLANTIC	QUEBEC	ONTARIO	PRAIRIES	B.C.
MANAGER	Δ	*	0 (35-10950)	*	Δ
TSRA	*	0 (30-19025)	- (75-34095)	0 (20-15130)	*
TEACHING	Δ	*	- (20-26545)	*	*
MEDICINE	*	+ (155-22155)	+ (230-28855)	0 (25-16980)	*
CLERICAL	0 (60-27455)	0 (185-122260)	+ (1275-171365)	0 (95-68025)	0 (30-41870)
SALES	0 (20-14185)	- (25-36255)	- (145-67610)	0 (35-28550)	*
SERVICES	0 (65-23095)	+ (105-54225)	+ (445-79530)	+ (125-43375)	0 (25-29520)
FARMING	Δ	Δ	- (60-35810)	*	*
PRIMARY	Δ	Δ	*	Δ	Δ
PROCESS	*	*	- (50-23685)	*	Δ
MACHINE	+ (30-7755)	0 (95-52140)	0 (370-69080)	0 (20-18270)	*
CONSTRUCTION	0 (25-9595)	*	- (60-33840)	*	Δ
TRANSPORTATION	*	*	- (50-19785)	*	Δ
OTHER	+ (30-8065)	0 (30-29585)	- (195-52870)	*	+ (20-13075)
NOT DETERMINED	+ (85-160005)	+ (160-53975)	+ (460-66005)	+ (80-32525)	*

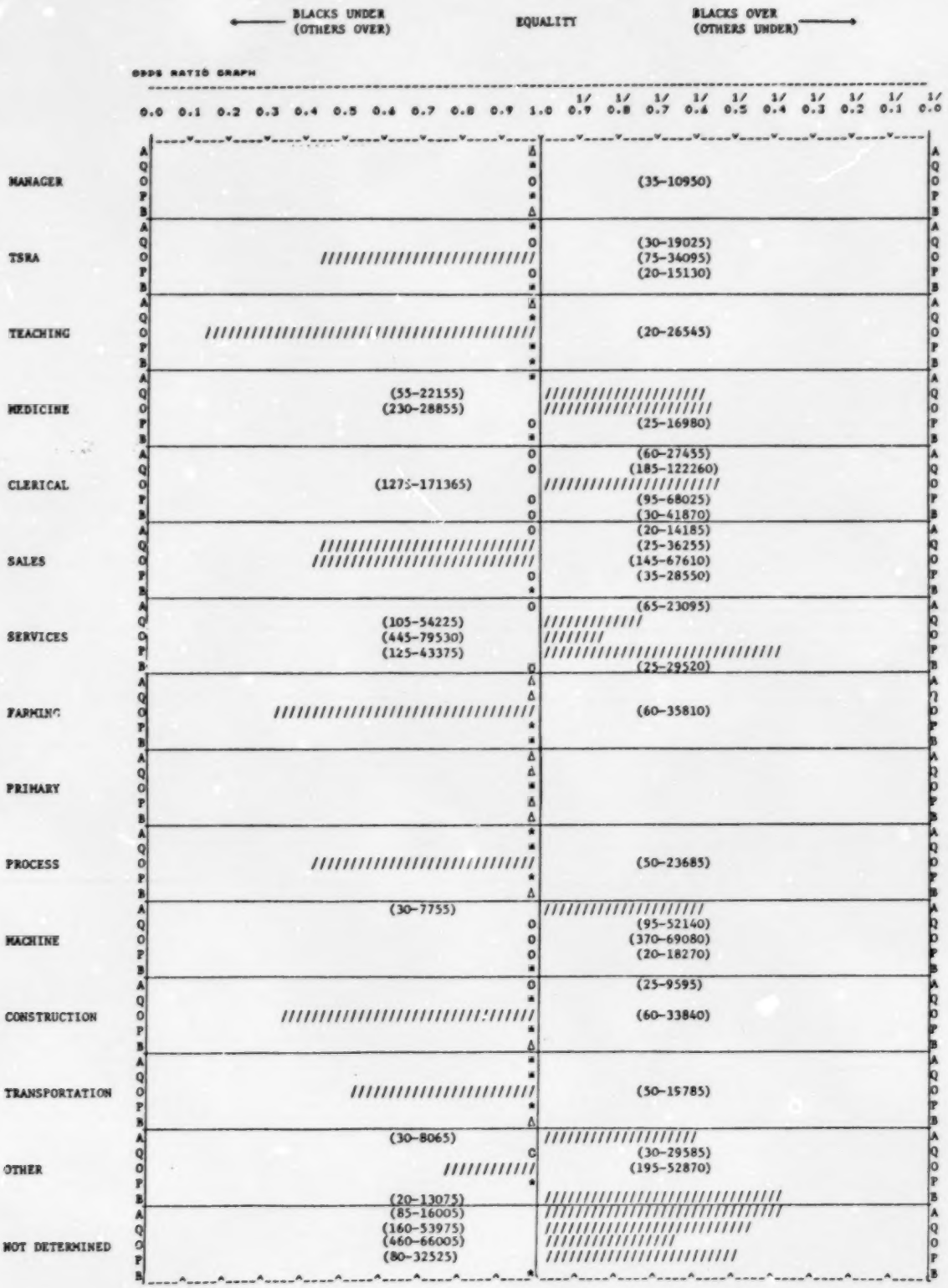
H_o: $\phi = 1$
$p = 0.01$

N = (Blacks .. Others)

Symbol Legend

Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
0 = The null is sustained
- = The null is rejected: Blacks "under" represented
+ = The null is rejected: Blacks "over" represented

FIG. 9.1 — OCCUPATIONS BY REGIONS: EMPLOYED 15-24 YRS. OF AGE



H_0: $\phi = 1$
$p = 0.01$

Symbol Legend:
Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
O = The null is sustained

N = (Blacks .. Others)

Region Legend:
A = Atlantic
Q = Quebec
O = Ontario
P = Prairies
B = British Columbia

Table 9.1.1 ... RANK LOCATIONS OF OCCUPATIONS ACCORDING TO AVERAGE ANNUAL INCOME; WITH THE CORRESPONDING PER CENT WHICH EACH OCCUPATION REPRESENTS OF THE STATED LABOUR FORCE POPULATION: EMPLOYED 15-24 YRS. OF AGE.

ccupa-ions ank	CANADIAN REGIONS									
	Atlantic		Quebec		Ontario		Prairies		B.C.	
	Occupations	%	Occupations	%	Occupations	%	Occupations	%	Occupations	%
1	Teaching	4	Manager	1	Manager	2	Manager	1	Manager	1
2	Manager	1	Teaching	4	Teaching	4	Teaching	3	Teaching	2
3	TSRA	4	Transport	2	Transport	3	Process	2	Transport	3
4	Machine	5	Medicine	5	Process	3	Primary	2	Machine	6
5	Construct.	6	Construct.	3	Machine	10	Machine	5	Other	7
6	Transport	3	Clerical	25	Construct.	5	Construct.	6	Process	5
7	Clerical	18	TSRA	4	TSRA	5	Transport	3	Construct.	5
8	Sales	9	Process	4	Clerical	24	TSRA	4	Primary	3
9	Service	15	Machine	11	Sales	9	Sales	8	TSRA	4
10	Medicine	5	Sales	7	Other	7	Medicine	5	Sales	10
11	Primary	4	Primary	1	Primary	1	Clerical	19	Clerical	21
12	Not Deter.	10	Other	6	Medicine	4	Other	6	Medicine	4
13	Process	6	Service	11	Not Deter.	9	Service	12	Not Deter.	10
14	Other	5	Not Deter.	11	Service	11	Not Deter.	9	Service	15
15	Farming	3	Farming	4	Farming	5	Farming	14	Farming	4

FIG. 9.1.1 --- RANK LOCATIONS OF OCCUPATIONS BY REGIONS: EMPLOYED 15-24 YRS. OF AGE

OCCUPATIONAL RANKS	ATLANTIC U	ATLANTIC E	ATLANTIC ⊖	QUEBEC U	QUEBEC E	QUEBEC ⊖	ONTARIO U	ONTARIO E	ONTARIO ⊖	PRAIRIES U	PRAIRIES E	PRAIRIES ⊖	BRITISH COLUMBIA U	BRITISH COLUMBIA E	BRITISH COLUMBIA ⊖
1		Δ			*			0	35 10950		*			Δ	
2		Δ			*		//////////		20 26545		*			*	
3		*			*			/////	50 19785		*			Δ	
4	30 7755		////	55 22155		////		//////	50 23685		Δ			*	
5		0	25 9595		*			0	370 69080		0	20 18270	20 13075		///////
6		*			0	185 122260		///////	60 33840		*			Δ	
7		0	60 27455		0	30 19025		//////	75 34095		*			Δ	
8		0	20 14185		*		1275 171365		/////		0	20 15130		Δ	
9		0	65 23095		0	95 52140		//////	145 67610		0	35 28550		*	
10		*			//////	25 36255		//	195 52870		0	25 16980		*	
11		Δ			Δ			*			0	95 68025		0	30 41870
12	85 16005		//////		0	30 29585	230 28855		////		*			*	
13		*		105 54225		///	460 66005		///	125 43375		//////		*	
14	30 8065		////	160 53975		/////	445 79530		//	80 32525		/////		0	25 29520
15		Δ			Δ			///////	60 35810		*			*	

Ho $\phi = 1$

Symbol Legend
Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
0 = The null is sustained

Legend
U = Blacks "under" represented
E = Equality
⊖ = Blacks "over" represented
N = Blacks / Others

Bar Scale: One stroke = 0.1 odds ratio distance from equality line (e.g., 3 strokes = .700 odds ratio; 6 strokes = .400 odds ratio)

TABLE 9.2

OCCUPATIONS BY REGIONS: EMPLOYED 25-44 YRS. OF AGE

CANADIAN OCCUPATIONS	CANADIAN REGIONS				
	ATLANTIC	QUEBEC	ONTARIO	PRAIRIES	B.C.
MANAGER	*	- (120-53645)	- (275-75600)	- (35-27675)	0 (35-15040)
TSRA	0 (35-11895)	+ (245-53670)	- (730-91375)	0 (85-32055)	0 (50-20725)
TEACHING	+ (65-15080)	+ (380-58795)	- (580-73330)	+ (175-31495)	0 (45-17900)
MEDICINE	+ (80-10660)	+ (565-39200)	+ (2185-54015)	+ (245-25530)	+ (120-15255)
CLERICAL	0 (75-30880)	+ (625-126120)	+ (2870-221925)	- (130-75270)	- (70-52395)
SALES	*	- (80-85575)	- (445-123970)	- (35-53920)	- (25-37600)
SERVICES	+ (215-34115)	+ (420-83125)	0 (1150-122310)	0 (160-54415)	0 (70-37950)
FARMING	*	*	- (25-42505)	*	*
PRIMARY	*	Δ	- (35-13520)	*	Δ
PROCESS	- (20-12280)	- (65-40740)	- (295-51720)	0 (25-12920)	0 (30-18020)
MACHINE	- (35-19620)	- (34-112645)	+ (2055-188265)	+ (230-43260)	0 (80-33820)
CONSTRUCTION	0 (75-22260)	- (50-58125)	- (415-96670)	0 (85-43695)	0 (55-31240)
TRANSPORTATION	- (30-15470)	- (30-43035)	- (200-56665)	0 (45-25660)	0 (30-19300)
OTHER	0 (35-11060)	- (115-43270)	- (605-77310)	0 (45-24705)	- (20-19005)
NOT DETERMINED	+ (90-17730)	0 (295-79770)	0 (905-91365)	0 (115-37935)	0 (45-26805)

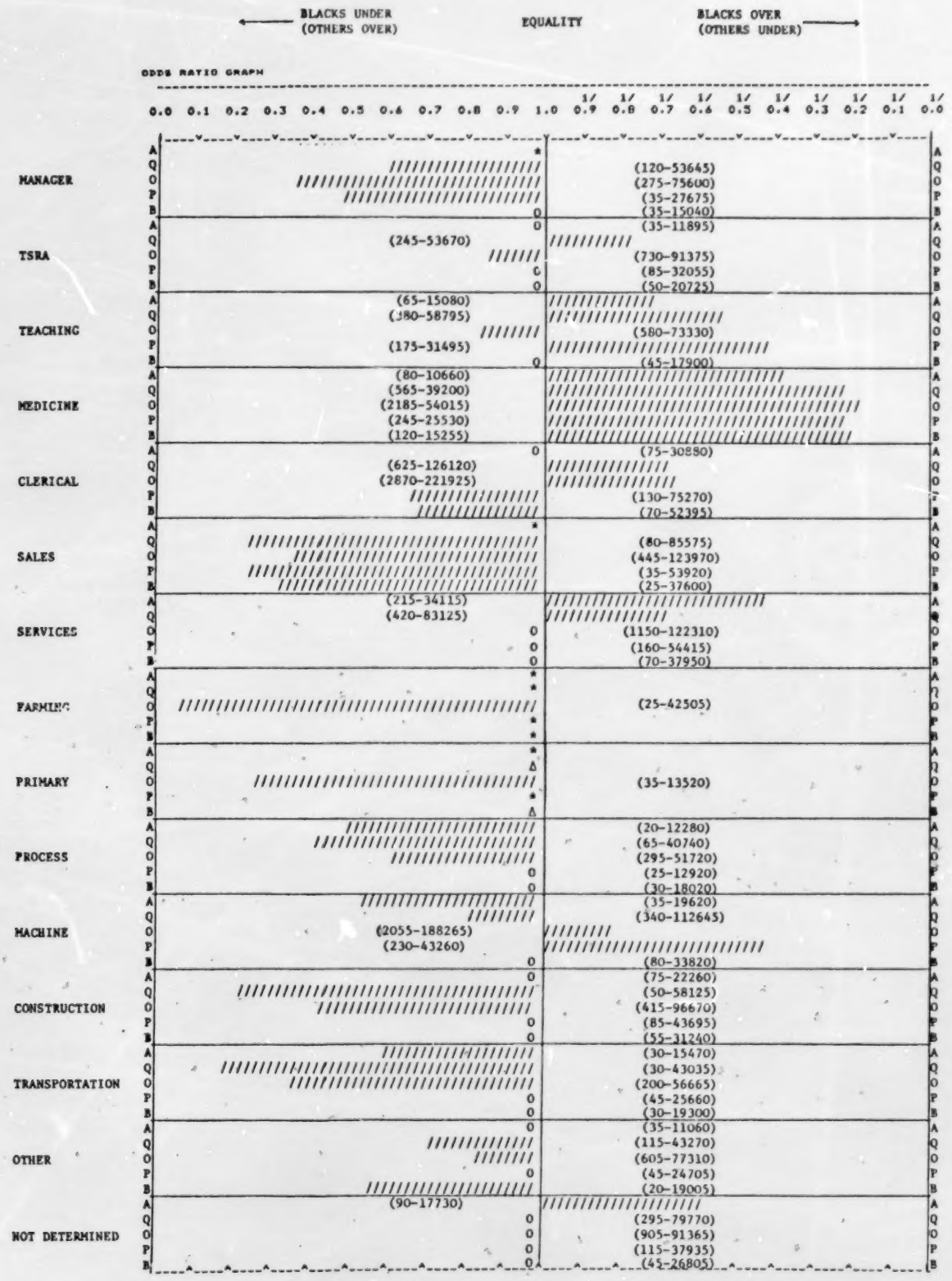
H_o: $\phi = 1$
$p = 0.01$

N = (Blacks .. Others)

Symbol Legend

Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
0 = The null is sustained
- = The null is rejected: Blacks "under" represented
+ = The null is rejected: Blacks "over" represented

FIG. 9.2 --- OCCUPATIONS BY REGIONS: EMPLOYED 25-44 YRS. OF AGE



H_0: $\phi = 1$
$p = 0.01$

Symbol Legend:
Δ = Zero Blacks reported
* = Frequencies for Blacks <20
0 = The null is sustained

N = (Blacks .. Others)

Region Legend:
A = Atlantic
Q = Quebec
O = Ontario
P = Prairies
B = British Columbia

Table 9.2.1 ... RANK LOCATIONS OF OCCUPATIONS ACCORDING TO AVERAGE ANNUAL INCOME; WITH THE CORRESPONDING PER CENT WHICH EACH OCCUPATION REPRESENTS OF THE STATED LABOUR FORCE POPULATION: EMPLOYED 25-44 YRS. OF AGE.

ccupa-ion nks	CANADIAN REGIONS									
	Atlantic		Quebec		Ontario		Prairies		B.C.	
	Occupations	%	Occupations	%	Occupations	%	Occupations	%	Occupations	%
1	Manager	4	Manager	6	Manager	5	Manager	5	Manager	4
2	TSRA	5	TSRA	6	Teaching	5	TSRA	6	Teaching	5
3	Teaching	6	Teaching	6	TSRA	7	Teaching	6	Transport	5
4	Machine	8	Sales	9	Construct.	7	Primary	1	TSRA	6
5	Sales	9	Medicine	4	Sales	9	Construct.	8	Construct.	9
6	Service	13	Construct.	6	Primary	1	Sales	9	Machine	9
7	Medicine	4	Transport	5	Transport	4	Process	2	Other	5
8	Construct.	9	Other	5	Other	6	Other	4	Process	5
9	Other	4	Process	4	Machine	14	Machine	8	Sales	10
10	Transport	6	Machine	12	Process	4	Transport	4	Primary	3
11	Process	5	Clerical	14	Medicine	4	Medicine	4	Medicine	4
12	Clerical	12	Primary	1	Not Deter.	7	Service	10	Service	10
13	Not Deter.	7	Not Deter.	9	Service	9	Clerical	13	Not Deter.	7
14	Primary	6	Service	9	Clerical	16	Not Deter.	7	Clerical	14
15	Farming	2	Farming	3	Farming	3	Farming	13	Farming	2

FIG. 9.2.1 --- RANK LOCATIONS OF OCCUPATIONS BY REGIONS: EMPLOYED 25-44 YRS. OF AGE

OCCUPATIONAL RANKS	ATLANTIC U	ATLANTIC E	ATLANTIC Θ	QUEBEC U	QUEBEC E	QUEBEC Θ	ONTARIO U	ONTARIO E	ONTARIO Θ	PRAIRIES U	PRAIRIES E	PRAIRIES Θ	BRITISH COLUMBIA U	BRITISH COLUMBIA E	BRITISH COLUMBIA Θ
1		*			////	120 53645	//////	275 75600		/////	35 27675			0	35 15040
2		0	35 11895	245 53670	//			//	580 73330		0	85 32055		0	45 17900
3	65 15080		///	380 58795	/////			/	730 91375	175 31495		//////		0	30 19300
4		/////	35 19620	////////	80 85575		//////		415 96670		*			0	50 20725
5		*		565 39200	////////		//////		445 123970		0	85 43695		0	55 31240
6	215 34115		//////	////////	50 58125		///////		35 13520	////////		35 53920		0	80 33820
7	80 10660		//////	////////	30 43035		//////		200 56665		0	25 12920	////		20 19005
8		0	75 22260	///	115 43270			//	605 77310		0	45 24705		0	30 18020
9		0	35 11060	//////	65 40740		2055 188265	//		230 43260		//////	////////		25 37600
10		////	30 15470		//	340 112645		////	295 51720		0	45 25660		Δ	
11		/////	20 12280	625 126120		///	2185 54015		////////	245 25530		////////	120 15255		////////
12		0	75 30880		Δ			0	905 91365		0	160 54415		0	70 37950
13	90 17730		////		0	295 79770		0	1150 122310		///	130 75270		0	45 26805
14		*		420 83125	///		2870 221925	///			0	115 37935		///	70 52395
15		*			*		/////////		25 42505		*			*	

H_o $\phi = 1$

Symbol Legend
Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
0 = The null is sustained

Legend
U = Blacks "under" represented
E = Equality
Θ = Blacks "over" represented
N = Blacks / Others

Bar Scale: One stroke = 0.1 odds ratio distance from equality line (e.g., 3 strokes = .700 odds ratio; 6 strokes = .400 odds ratio)

TABLE 9.3

OCCUPATIONS BY REGIONS: EMPLOYED 45-64 YRS. OF AGE

CANADIAN OCCUPATIONS	CANADIAN REGIONS				
	ATLANTIC	QUEBEC	ONTARIO	PRAIRIES	B.C.
MANAGER	Δ	− (20-38055)	− (65-64250)	*	*
TSRA	*	0 (25-23520)	− (70-42295)	+ (20-12385)	*
TEACHING	0 (20-6425)	+ (55-15010)	+ (105-23965)	+ (20-14005)	*
MEDICINE	*	+ (60-15550)	+ (365-32840)	+ (35-13705)	Δ
CLERICAL	*	− (30-69970)	− (245-151000)	*	0 (20-36065)
SALES	*	− (20-59245)	− (55-103550)	Δ	*
SERVICES	+ (115-25015)	+ (160-63640)	+ (440-113240)	+ (65-53760)	+ (55-36910)
FARMING	+ (25-6255)	*	*	(20-44080)	Δ
PRIMARY	Δ	Δ	Δ	Δ	*
PROCESS	0 (20-10050)	*	0 (65-37840)	Δ	*
MACHINE	0 (20-13460)	− (45-64545)	0 (260-116150)	0 (20-28055)	*
CONSTRUCTION	+ (70-20095)	*	− (70-59485)	*	*
TRANSPORTATION	+ (40-10865)	0 (30-25015)	0 (80-35565)	*	*
OTHER	0 (35-10160)	0 (25-30145)	0 (130-55855)	Δ	*
NOT DETERMINED	+ (50-12635)	+ (90-51345)	+ (190-62830)	*	*

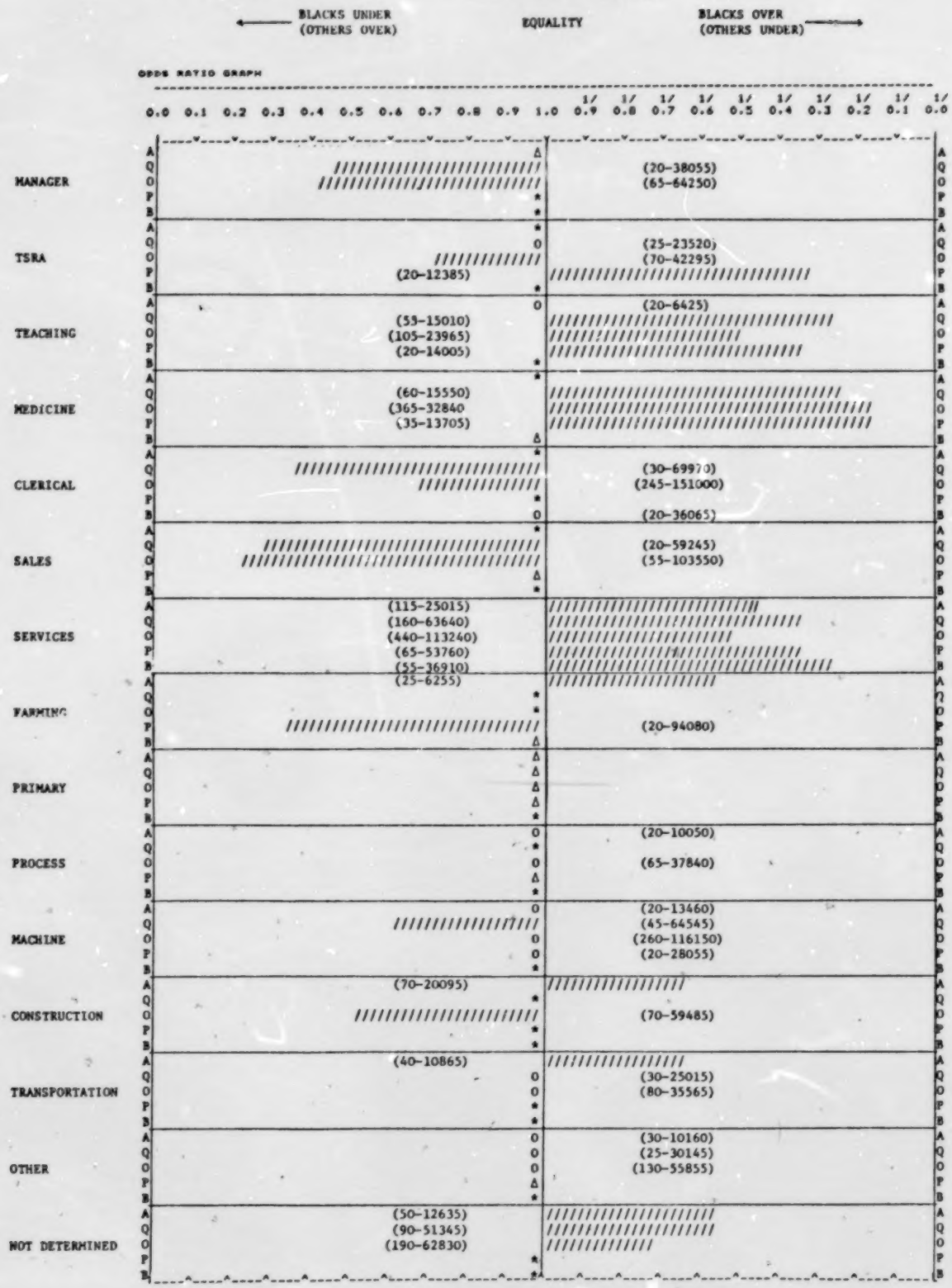
H_o: $\phi = 1$
$p = 0.01$

N = (Blacks .. Others)

Symbol Legend

Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
0 = The null is sustained
− = The null is rejected: Blacks "under" represented
+ = The null is rejected: Blacks "over" represented

FIG. 9.3 --- OCCUPATIONS BY REGIONS: EMPLOYED 45-64 YRS. OF AGE



H_o: $\phi = 1$
$p = 0.01$

Symbol Legend:
Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
O = The null is sustained

N = (Blacks .. Others)

Region Legend:
A = Atlantic
Q = Quebec
O = Ontario
P = Prairies
B = British Columbia

Table 9.3.1 ... RANK LOCATIONS OF OCCUPATIONS ACCORDING TO AVERAGE ANNUAL INCOME; WITH THE CORRESPONDING PER CENT WHICH EACH OCCUPATION REPRESENTS OF THE STATED LABOUR FORCE POPULATION: EMPLOYED 45-64 YRS. OF AGE.

ccupa-ion anks	CANADIAN REGIONS									
	Atlantic		Quebec		Ontario		Prairies		B.C.	
	Occupations	%	Occupations	%	Occupations	%	Occupations	%	Occupations	%
1	Manager	5	Manager	7	Manager	7	Manager	5	Manager	5
2	TSRA	3	TSRA	4	Teaching	3	Teaching	3	Teaching	3
3	Teaching	4	Teaching	3	TSRA	4	Primary	.7	TSRA	4
4	Medicine	3	Medicine	3	Primary	.9	TSRA	3	Medicine	4
5	Machine	7	Transport	5	Construct.	6	Transport	4	Other	5
6	Transport	6	Process	5	Process	4	Construct.	6	Construct.	8
7	Other	6	Construct.	6	Sales	11	Process	2	Process	5
8	Construct.	11	Other	5	Machine	12	Machine	7	Primary	3
9	Clerical	11	Sales	11	Transport	4	Other	4	Transport	4
10	Sales	11	Clerical	13	Other	6	Medicine	3	Machine	8
11	Process	5	Machine	12	Medicine	3	Clerical	11	Sales	12
12	Service	14	Primary	.1	Clerical	16	Sales	10	Clerical	14
13	Not Deter.	7	Service	12	Not Deter.	7	Service	13	Not Deter.	8
14	Primary	6	Not Deter.	9	Service	12	Not Deter.	7	Service	14
15	Farming	3	Farming	5	Farming	5	Farming	22	Farming	3

FIG. 9.3.1 --- RANK LOCATIONS OF OCCUPATIONS BY REGIONS: EMPLOYED 45-64 YRS. OF AGE

OCCUPATIONAL RANKS	ATLANTIC U	ATLANTIC E	ATLANTIC Θ	QUEBEC U	QUEBEC E	QUEBEC Θ	ONTARIO U	ONTARIO E	ONTARIO Θ	PRAIRIES U	PRAIRIES E	PRAIRIES Θ	BRITISH COLUMBIA U	BRITISH COLUMBIA E	BRITISH COLUMBIA Θ
1		Δ		/////		20/38055	//////		65/64250		*			*	
2		*			0	25/23520	105/23965	/////		20/14005		///////		*	
3		0	20/6425	55/15010		///////	///		70/42295		Δ			*	
4		*		60/15550		////////		Δ		20/12385		///////		Δ	
5		0	20/13460		0	30/25015	/////		70/59485		*			*	
6	40/10865		////		*			0	65/37840		*			*	
7		0	30/10160		*		////////		55/103550		Δ			*	
8	70/20095		////		0	25/30145		0	260/116150		0	20/28055		*	
9		*		///////		20/59245		0	80/35565		Δ			*	
10		*		///////		30/69970		0	130/55855	35/13705		////////		*	
11		0	20/10050	////		45/64545	365/32840		////////		*			*	
12	115/25015		//////		Δ			///	245/151000		Δ			0	20/36065
13	50/12635		////	160/63640		///////	190/62830	///		65/53760		///////		*	
14		Δ		90/51345		////	440/113240	/////			*		55/36910		///////
15	25/6255		////		*			*		///////		20/94080		Δ	

Ho $\phi = 1$

Symbol Legend
Δ = Zero Blacks reported
* = Frequencies for Blacks < 20
0 = The null is sustained

Legend
U = Blacks "under" represented
E = Equality
Θ = Blacks "over" represented
N = Blacks / Others

Bar Scale: One stroke = 0.1 odds ratio distance from equality line (e.g., 3 strokes = .700 odds ratio; 6 strokes = .400 odds ratio)

APPENDIX A

MAJOR OCCUPATIONAL GROUPS: DEFINITIONS

CODE

11. MANAGERIAL ADMINISTRATIVE AND RELATED OCCUPATIONS (MANAGER)

This major group includes occupations concerned with managerial and administrative activities such as: planning, organizing, co-ordinating, directing, controlling, staffing; and formulating, implementing, or enforcing policy in government, industry and other organizations. Middle-management occupations, managers of chains of establishments, and occupations closely related to management and administration are included in this major group.

The following four "occupation groups" have been amalgamated in the custom tabulation produced for this study by Statistics Canada. They are referred to as TSRA, (Technical, Social, Religion, Artistic):

21. OCCUPATIONS IN NATURAL SCIENCES, ENGINEERING AND MATHEMATICS (TSRA)

This major group includes occupations concerned with research and the practical application of scientific knowledge in the field of physical sciences, including specializations such as chemistry, electricity, electronics, geology, physics, mechanics, and meteorology; in life science, including specializations such as agriculture, biology, and pharmacology; in architecture, engineering, surveying and draughting; in mathematics, statistics, systems analysis and actuarial sciences; and in related technical fields.

23. OCCUPATIONS IN SOCIAL SCIENCES AND RELATED FIELDS (TSRA)

This major group includes occupations concerned with: assisting individuals, families and groups, to solve their social, economic and personal problems; planning and conducting social services to meet the needs of communiy, applying principles related to statute law and its administration; organizing, developing and maintaining libraries, archives, museums and art galleries; counselling individuals and groups; and performing other related duties.

25. OCCUPATIONS IN RELIGION (TSRA)

This major group includes occupations primarily concerned with providing spiritual and moral guidance to members of a religious faith or denomination and others, expounding religious doctrine and performing other activities associated with the practice of religion.

33. ARTISTIC, LITERARY, PERFORMING ARTS AND RELATED OCCUPATIONS (TSRA)

This major group includes occupations concerned with creating and executing artistic works, by sculpturing, painting, drawing, engraving, etching, and by applying artistic media for illustrative, decorative and sales promotion purposes; creating designs for product and interior decoration; taking photographs, directing and operating motion picture

and television cameras; composing, adapting, conducting and performing musical works and dances; producing, directing and acting in theatrical, motion picture and broadcast productions; making broadcast announcements; translating and interpreting languages, and preparing and editing written material.

27. TEACHING AND RELATED OCCUPATIONS (TEACHING)

This major group includes occupations concerned with conducting classes and giving private lessons to instruct students at all levels, undertaking research, advising on teaching methods and instructional aids, organizing teaching activities, and performing related duties.

31. OCCUPATIONS IN MEDICINE AND HEALTH (MEDICINE)

This major group includes occupations concerned with preventing and diagnozing human and animal ailments, and prescribing and giving medical and surgical treatment for diseases and illnesses, including dental disorders; giving professional and non-professional nursing care and providing special therapeutic services; and providing phamaceutical, dietary, optical and medical support services.

41. CLERICAL AND RELATED OCCUPATIONS (CLERICAL)

This major group includes occupations concerned with recording, transcribing and typing data; composing correspondence; classifying and filing publications, correspondence and similar material, organizing and recording financial and other data into accounts and quantitative records; paying and receiving money; operating office machines and electronic data-processing equipment; storing, distributing and accounting for stores of materials, receiving clients and providing information; operating telephone switchboards; distributing mail and delivering messages; and performing other clerical duties.

51. SALES OCCUPATIONS (SALES)

This major group includes occupations concerned with selling commodities and services, buying commodities for resale, and with conducting wholesale and retail businesses, on their own or owners' behalf or in partnership. Managing supervisors of individual chain stores and of departments in stores are in this major group.

61. SERVICE OCCUPATIONS (SERVICE)

This major group includes occupations concerned with providing protection against fire, crime, accidents, war and other emergencies; providing catering services including cooking, preparing and serving food and beverages; providing accommodation services; maintaining cleanliness in establishments, such as hotels, motels, lodging houses, apartment and office buildings; escorting guests and handling baggage; preparing sleeping accommodation; arranging funeral embalming and cemetery services; cutting and styling hair, and giving beauty treatments to patrons; providing personal services such as, caring for children, ushering, and

arranging for people's comfort on tours, aboard ships and airplanes; washing, cleaning, drying, pressing and dyeing apparel and textile furnishings; cleaning building interiors and equipment, operating elevators, and performing minor maintenance repairs, and providing other related services.

71. FARMING, HORTICULTURAL AND ANIMAL-HUSBANDRY OCCUPATIONS (FARMING)

This major group includes occupations concerned with growing and harvesting crops and plants; raising animals, poultry and other birds; landscaping and maintaining parks, gardens and grounds; and providing agricultural services to farmers.

73. PRIMARY FISHING, HUNTING, TRAPPING AND RELATED OCCUPATIONS (PRIMARY)

This major group includes occupations concerned with harvesting fish and other aquatic life from deep sea, coastal and inland waters; breeding fish, hunting whales and seals; and hunting and trapping wild animals or birds.

81/82. PROCESSING OCCUPATIONS (PROCESS)

This major group includes occupations concerned with refining, mixing, compounding, chemically treating, conditioning or otherwise treating materials such as ores, metals, clay, class stone, chemicals, petroleum, rubber, plastic, foods, beverages, paper, wood, textile fibres, hides, pelts and tobacco for direct use; or to produce semi-finished materials for further machining or fabricating; or to produce finished products, such as bricks, tiles, processed food, newsprint, plywood and cloth.

83. MACHINING AND RELATED OCCUPATIONS (MACHINING) (see also 85)

This major group includes occupations concerned with using machines and hand tools to shape or work such materials as metal, plastic, wood, clay, glass or stone by cutting, boring, milling, abrading, planning, punching, pressing, rolling, engraving, welding or similar methods.

87. CONSTRUCTION TRADES OCCUPATIONS (CONSTRUCTION)

This major group includes occupations concerned with erecting, repairing and maintaining buildings and other works such as bridges, highways, railways, airports, electrical power and communication lines, towers, waterways, and utility services.

91. TRANSPORT EQUIPMENT OPERATING OCCUPATIONS (TRANSPORT)

This major group includes occupations concerned with operating transport equipment; such as, aircraft, trains, ships, trucks and buses to move freight and passengers. Occupations engaged in direct support activities which here are an integral part of the transportation of passengers and cargo are also classified in this major group.

93. OTHER MATERIAL-HANDLING AND RELATED OCCUPATIONS, N.E.C. (OTHER)

This major group includes occupations not elsewhere classified, concerned with moving, lifting, loading and packaging materials and products.

85. PRODUCT FABRICATING, ASSEMBLING AND REPAIRING OCCUPATIONS (MACHINING)

This major group includes occupations concerned with using manufactured components and assemblies to produce or repair products such as automobiles, airplanes, and marine craft; industrial and agricultural machinery; commercial and business machines; domestic appliances; precision instruments; electrical and electronic equipment; rubber and plastic products; garments; footwear; furniture and housewares by assembling them on a production line in a factory or in a shop or yard. Activities include: final working, fitting and finishing of parts and assemblies to complete fabrication, installation and repair of finished products or equipment.

00. OCCUPATIONS NOT STATED (NOT SAY)

APPENDIX B

CENSUS IDENTIFICATION AND CODING OF CANADIAN BLACKS
WITH CORRESPONDING SAMPLE CONSIDERATIONS

Statistics Canada must be commended for its admirable effort in amassing and processing, for many varied purposes, tremendous quantities of data, which are required to be collected under extremely difficult and in some instances sensitive conditions. Undoubtedly, the problems entailed in classifying categories of data of such complexity and magnitude are in of themselves intractable. Among the latter of course is defining the various "racial and/or ethnic" groups comprising the Canadian population and classifying the respective members accordingly. Certainly, the latter form of the task in question entails special difficulties in determining who is to be enumerated as a Canadian Black. Black Canadians are considerably varied in ethnicity, culture, language and self-identification. They are indeed multi-ethnic and multicultural! Yet, it is assumed that psychological, sociological and material consequences of enormous import emanate from research decisions which fail to achieve at least comparable exactness in the enumeration of Canadian Blacks. With the view to identifying the shortcomings of this research, on the one hand; and on the other, contributing to increased accuracy in the collection and processing of census data the following considerations are noted.

In census reporting Blacks are only identifiable as either "Negro" or "West Indian". These two designations as identifications for Blacks are obtained principally from answers given to schedule questions numbered 15 and perhaps 11 and 14. Question 15 is given as follows" "To what ethnic or cultural group did you or your ancestor (on the male side) belong on coming to this continent?" In coding answers provided in the schedule's response category labeled "other, write here", the following answers were coded as "Negro": "Negro"; "African"; "Austafrican"; "Black"; "Liberian"; "Mulatto"; and "Negrillo". "West Indian" on the other hand, was coded from such responses as" "West Indian"; "Bahamian"; "Barbados"; "British West Indian"; "Dominican"; "Haitian";"Indian, West"; "Jamaican"; and "Trinidad". The following responses ---"Abyssinian", "Bermudian", "British Guyanese", "Ethiopian", and "South African", are coded as "Other". (This material is taken from Statistics Canada's "Ethnic Group-Summary of Codes"). From the "Summary of Codes" it is apparent that Blacks were not identified as such, and hence not coded as such, if they gave one of the following answers to census schedule question 15: "British", "Brazilian", "Cuban", "French", "South American", "Abyssinian", "Bermudian", "British Guyanese", "Ethiopian", "South African", or any other national origin designation other than South-West Africa. In answering question number 11 ("Where were you born?") or 14 ("Of what country are you a citizen?") respondents were not identifiable as Black if their country of birth or citizenship was one of the given response options such as "Canada" the "U.K." or the "U.S.A." Correspondingly, Blacks were not likely to have been identified and coded as Black if, in answering questions 11 or 14, any national origin designation other than South-West African and Caribbean responses were entered in the "Other, write here" category.

Finally, and most significantly for this research in particular, if the Black respondent and his/her recent ancestors were born in Canada and she/he didn't find the inherent logic of question number 15 compelling, then it is

very likely that such respondents would not have been identified and coded as Black. Moreover, the preceding eventuality could have resulted in a large portion of Native Canadian Blacks being included in the sub-sample designated in this research as "all other Canadians." As such, a large portion of 1971 census ENUMERATED Blacks would be recent Canadian Black immigrants. Hence, the sample of Canadian Blacks in this research would be heavily weighted with recent black immigrants. The latter suppositions are supported by a comparison of the ecuational---and age, distributions of Canadian born enumerated Black males with immigrant enumerated Black males. These distributions are given immediately below in Tables 14 and 15.

TABLE 14

COMPARISON OF THE EDUCATIONAL DISTRIBUTIONS OF CANADIAN CENSUS SUB-SAMPLES OF EMPLOYED MALES 15-60+ YEARS OF AGE, IN EACH OF FOUR EDUCATIONAL GRADE LEVELS

1971 MALE CENSUS SUB-SAMPLES	EDUCATION GRADE LEVELS								TOTAL	
	9		9-13		1-4 UNIV.		5+ UNIV.			
	N	%	N	%	N	%	N	%	N	%
IMMIGRANT BLACKS	10	8	80	65	20	16	13	11	123	100
CANADIAN BORN BLACKS	16	31	32	63	3	6	0	0	51	100
TOTAL	26	15	112	64	23	13	13	7	174	99
ALL OTHER IMMIGRANTS	4092	34	5634	47	1396	12	848	7	11970	100
ALL OTHER CANADIAN BORN	14893	31	26397	55	4911	10	1929	4	48130	100
TOTAL	18985	32	32031	53	6307	10	2777	5	60100	100

SOURCE: Statistics Canada's one per cent Public Use Sample Tape (PUST), the individual file, 1971 Census

TABLE 15

COMPARISON OF THREE AGE RANGE DISTRIBUTIONS OF CANADIAN CENSUS SUB-SAMPLES OF EMPLOYED MALES 15-60+ YEARS OF AGE

1971 MALE CENSUS SUB-SAMPLES	AGE RANGES							
	15 - 24		25 - 44		45 - 60+		TOTAL	
	N	%	N	%	N	%	N	%
IMMIGRANT BLACKS	21	17	92	75	10	8	123	100
CANADIAN BORN BLACKS	15	29	25	49	11	22	51	100
TOTAL	36	21	117	67	21	12	194	100
ALL OTHER IMMIGRANTS	1510	13	5501	46	4959	41	11970	100
ALL OTHER CANADIAN BORN	11939	25	20612	43	15579	32	48130	100
TOTAL	13449	22	26113	43	20538	34	60100	99

SOURCE: Same as Table 14

In Tables 14 and 15 it will be observed that:

1. Seventy-one per cent of the 1971 employed enumerated Canadian Black males are immigrants---92 per cent having immigrated between 1961-1971;

2 Ninety-two per cent of the latter (i.e., 1971 employed Canadian enumerated Black male immigrants) have nine or more years of education and 27 per cent with one or more years of university; whereas, 69 per cent of the employed Canadian born enumerated Black males have nine or more years of education and only 6 per cent with one or more years of university;

3. Ninety-four per cent of the 1971 employed enumerated Black male immigrants are in the 15-44 age range with only 6½ per cent older than 45 years of age; whereas, 78 per cent of the 1971 employed

Canadian born enumerated Black males are in the 15-44 age range with 22 per cent older than 45 years of age.

The data in Table 14 establishes that over 71 per cent of the Black sub-sample of males in this investigation are immigrants. It is apparent from Table 15 (or 5) that this census of employed enumerated Black males are primarily in the prime age range of 25-44 years and on the average is better educated at each of the four educational grade levels than other Canadians.

The preceding and the following considerations indicate quite clearly that some unknown portion of Canadian Blacks are NOT enumerated as part of the Canadian Black population. Statistics Canada reports for 1971 a combined Canadian population total of 66,470 Blacks: 34,445 identified as "Negro" and 28,025 listed as "West Indian". Using the rate of Black immigrants to Canada during the past seven years, Professor Clarence Bayne of Concordia University estimates the present Canadian Black population to be about 300,000. Prorated at 10,000 Black immigrants per year would signify that the 1971 census figure of 66,470 indicates an under-representation by a factor of about 3.6 (239,292). Since it is apparent that some unknown portion of the 1971 Canadian Black population was not coded as Black it follows that:

a. the reported 1971 census of 66,470 Canadian Blacks constitutes an under-representation of the actual Canadian Black population;

b. In Sample 1, listed in Table 1.1 on page 7 of this report, the Black sub-sample of 14,565 employed males 15-64 years of age is most certainly under-represented and most likely unrepresentative of all lack males in this category; moreover, since samples 1 and 2 listed in Table 1, are drawn from the same data base, it follows that the conclusions that apply to sample 1 also apply to sample 2;

c. correspondingly, the all other Canadian sub-sample of 7, 875, 435 is most certainly over-represented. In this connection, it is supposed that approximately 1 in every 4.4 of the unknown portion of Canadian Blacks which were not coded as Blacks are included in this comparative "Other" sub-sample.

It may be argued of course that if the non-enumerated Blacks subsumed in the "all other Canadians" category have the same occupational/industrial distribution as the enumerated Blacks, then the effect of the non-enumerated blacks included in the "all other Canadians" sub-sample would be to reduce the differences between the two study sub-samples; and thus to reduce the degrees of under/over representation shown in this report from the degrees of under/over representation in the actual population. Further, if the non-enumerated Blacks have greater degrees of under/over representation than the enumerated Blacks then the figures in this report would be further reduced

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